APPENDIX B PUBLIC AND AGENCY INVOLVEMENT

Acronyms, Abbreviations, and Symbols

AFB Air Force Base

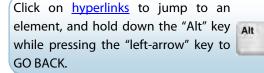
EIS Environmental Impact Statement

GLI Gulf Regional Airspace Strategic Initiative Landscape Initiative

GRASI Gulf Regional Airspace Strategic Initiative

B.1 PUBLIC AND AGENCY INVOLVEMENT (INTRODUCTION)

- 2 Public involvement is an integral part of developing
- a representative EIS. National Environmental Policy
- 4 Act requirements for public involvement are set
- 5 forth in the Air Force Environmental Impact Analysis
- 6 Process, Council on Environmental Quality



- 7 regulations, at 32 Code of Federal Regulations Part 989. These regulations describe what the
- 8 Air Force must do as a part of the public hearing and public comment process to involve the
- 9 public. The entire public involvement process ensures that the EIS has adequately addressed
- significant issues important to the people who will be impacted by the Air Force's decisions.
- In addition to information on the public hearings for the Environmental Impact Statement
- 12 (EIS) on the proposed Gulf Regional Airspace Strategic Initiative (GRASI) Landscape Initiative
- 13 (GLI), this appendix contains a summary and overview of the public scoping process , to
- include public scoping, agency correspondence, and public comments received during the
- public scoping process. Also included are notification and meeting materials distributed to
- the public during the scoping process.
- 17 This appendix contains a copy of the public hearing notice letter as well as the GLI EIS Public
- 18 Scoping Summary Report, which comprises the following:
- 19 Introduction

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- Scoping Objectives and Approach
- 21 Public Notification Process
 - ♦ Federal Register Notice of Intent
 - Interagency and Intergovernmental Coordination for Environmental Planning
- ◆ Scoping Advertisements, Press Releases, and Public Service Announcements
- Website
- o Point of Contact

 o Point of Contact
- Scoping Meetings
- 28 Media Coverage
- Synopsis of Public Comments
- o Summary of Comments by Resource Area
- Conclusion
- Scoping Notification Materials
- Scoping Meeting Materials
- Scoping Comments and Transcripts
- Scoping Media Coverage

B.2 DRAFT EIS DISTRIBUTION AND PUBLIC HEARING NOTICE LETTER (WITHOUT ATTACHMENTS)



DEPARTMENT OF THE AIR FORCE HEADQUARTERS 96TH TEST WING (AFMC) EGLIN AIR FORCE BASE FLORIDA

MEMORANDUM FOR <<ADDRESSEE>>

FROM: Brigadier General David A. Harris Commander, 96th Test Wing 101 West D Avenue, Suite 132 Eglin Air Force Base FL 32542-5495

SUBJECT: Draft Environmental Impact Statement (EIS) for the Gulf Regional Airspace Strategic Initiative (GRASI) Landscape Initiative

- 1. Pursuant to Section 102(2)(e) of the National Environmental Policy Act (NEPA), as implemented by the Council on Environmental Quality Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508), the United States Air Force is announcing the availability for public review and comment the enclosed Draft GRASI Landscape Initiative (GLI) EIS. The Draft EIS can also be downloaded from grasicis.leidoscemg.com. The Draft EIS evaluates the potential environmental consequences of the Air Force proposal to apply to be a permitted user of northwest Florida state forests for nonhazardous military training activities and to identify and use up to 12 emitter sites in northwest Florida through the GRASI Landscape Initiative.
- 2. Under the GLI EIS, the Air Force's Proposed Action is to:
- a. Partner with the State of Florida to obtain permits to use lands that the state has already identified as potentially available for training (Blackwater River State Forest [BRSF] and Tate's Hell State Forest [THSF]), for nonhazardous training activities on an as-needed basis. Training activities proposed for the BRSF and THSF would be compatible with the state forests and include non-hazardous training activities that are already conducted on Eglin Air Force Base (AFB) Range. No live munitions would be used and no substantive land disturbance or construction activities would occur. Training activities associated with the Proposed Action consist of utilizing existing areas cleared by the FFS as part of regular forest management activities for helicopter landing and drop zones, use of existing airfields and roadways for aircraft landings, and other land and air training activities. These activities currently occur in the areas between designated test/training sites on the Eglin Range.
- b. Partner with the Florida Forest Service and the Florida Fish and Wildlife Conservation Commission for use of associated lands for placement of temporary and mobile training radar emitters. The emitter sites would support development of a simulated integrated air defense system, which would provide unique, viable, and robust air training. The attached map (Atch 1) shows the locations of the proposed emitter sites and of BRSF and THSF.

- 3. This Draft EIS addresses the actions ready for decision, namely, those described previously as the Proposed Action. A no-action alternative is also examined that does not implement the GLI. No alternative will be selected until after the EIS is complete.
- 4. The Proposed Action is needed because there is a projected regional shortfall of military training and testing land and airspace in the GRASI region. The demand for the land range and use of restricted areas over the Eglin Range Complex creates scheduling conflicts for nonhazardous training. Eglin AFB's primary mission is test and evaluation. Consequently, training activities sometimes have a lower priority. From time to time, training units are unable to obtain the necessary time on the range or in the restricted areas to complete their requirements. As a result, the Air Force needs additional flexibility in the GRASI region to accommodate the increasing levels of testing and training activity required by the current mission.
- 5. The purpose of the Proposed Action is for the Air Force to gain much needed flexibility when the land range and restricted areas are not available. Furthermore, they would be able to train in a realistic threat environment that would resemble actual combat scenarios.
- 6. The Air Force will be holding three public hearings in areas potentially impacted by the proposal. The purpose of the hearings is to further solicit input regarding corrections or clarifications in the Draft EIS; issues that have not been addressed; or new information to consider. The public review process for NEPA is also intended to cover the public involvement requirements under 36 CFR 800.2(d) for National Historic Preservation Act purposes. The attached flyer (Atch 2) advertises the hearings and we would appreciate it if you would post this flyer in a public location.
- 7. During the hearings, the Air Force will provide additional information about the GLI. Public and agency comments presented at the meetings, as well as written comments received by the Air Force during the Draft EIS review period and throughout the environmental process, will be considered in the preparation of the Final EIS.
- 8. The Air Force's notice of availability of the Draft EIS hearings was published in the Federal Register on May 9, 2014, and will also be published in local newspapers approximately two weeks prior to the hearings.

HEARING DATES AND LOCATIONS

Date	Location	Meeting Time
June 3, 2014	Carrabelle City Hall 1001 Gray Ave Carrabelle, Florida	6:00 – Open House 6:30-9 pm - Hearing
June 4, 2014	Franklin County Commission Main Courtroom 34 Forbes St Apalachicola, Florida	6:00 – Open House 6:30-9 pm - Hearing
June 5, 2014	Santa Rosa County Bagdad Recreation Facility 4591 School St Milton, Florida	6:00 – Open House 6:30-9 pm - Hearing

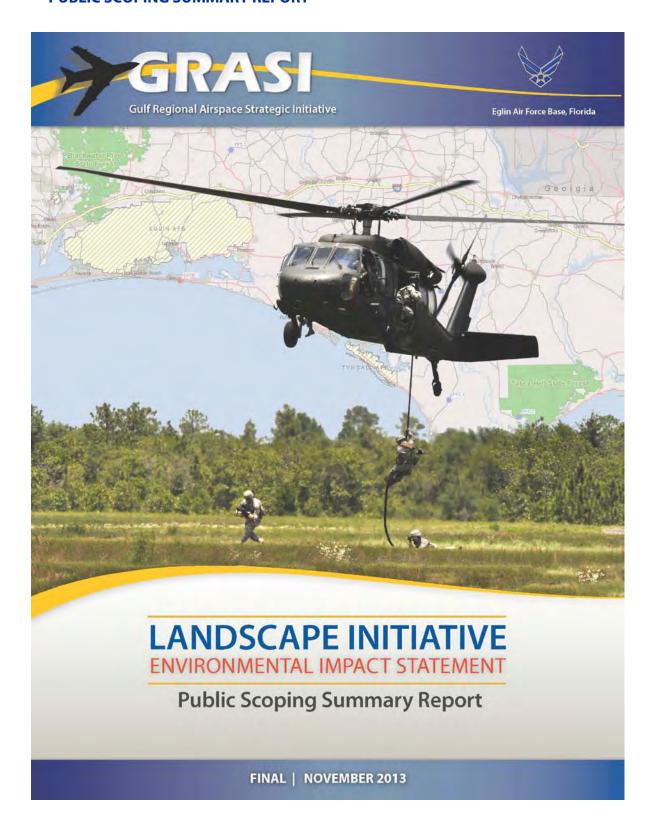
9. The public hearing will begin with an open house information session at 6 p.m., followed by an Air Force presentation at 6:30 p.m. and then an opportunity for formal public or government agency or representative verbal comment at 7 p.m. The open house session is an opportunity for community members to learn more about the GLI Draft EIS results and speak with Air Force personnel one-on-one.

10. For more information or to submit written comments, please visit the project website at grasieis.leidoseemg.com or contact: Mr. Mike Spaits, Eglin AFB Public Affairs Office, 96 TW/PA, 101 West D Ave., Room 238, Eglin AFB, FL 32542-5499; (850) 882-2836; michael.spaits@us.af.mil. The Air Force will accept comments at any time during the environmental analysis process. However, to ensure the Air Force has sufficient time to consider public input in the preparation of the Final EIS, please submit comments by June 23, 2014. Libraries should place this EIS document and the attached public meeting flyer in a conspicuous location for public availability until June 23, 2014. Thank you for your assistance in this matter.

DAVID A. HARRIS Brigadier General, USAF Commander

- 2 Attachments:
- 1. Draft GRASI Landscape Initiative EIS Executive Summary
- 2. Flyer of Hearing Locations

B.3 GRASI LANDSCAPE INITIATIVE EIS PUBLIC SCOPING SUMMARY REPORT



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Acronyms and Abbreviations

96 TW 96th Test Wing

96 TW/PA 96th Test Wing/Public Affairs

ACHP Advisory Council on Historic Preservation

AFB Air Force Base

AOPA Aircraft Owners and Pilots Association

BRAC
 BRSF
 Blackwater River State Forest
 CARL
 Conservation and Recreation Lands
 CEQ
 Council on Environmental Quality

CFR Code of Federal Regulations

dB decibels

DJJ Department of Juvenile Justice

DoD Department of Defense

DOPAA Description of Proposed Action and Alternatives

EIAP Environmental Impact Analysis Process
EIS Environmental Impact Statement

EO Executive Order

ESA Endangered Species Act

FAA Federal Aviation Administration
FDOT Florida Department of Transportation

FFS Florida Forest Service

FWC Florida Fish and Wildlife Conservation Commission

GCPEP Gulf Coastal Plan Ecosystem Partnership

GLI GRASI Landscape Initiative

GRASI Gulf Regional Airspace Strategic Initiative

HAF/A7 Headquarters Air Force

HAF/A30 HAF Office of Airspace, Ranges and Basing

IICEP Interagency and Intergovernmental Coordination for Environmental Planning

MOA Military Operations Area

NAS Naval Air Station

NEPA National Environmental Policy Act
NGO nongovernmental organization

NOI Notice of Intent
NOTAM Notice to Airmen
ORV off-road vehicle
PA Public Affairs
POC point of contact

PSSR Public Scoping Summary Report
RAF Recreational Aviation Foundation
SHPO State Historic Preservation Officer

THSF Tate's Hell State Forest USC United States Code

VSWC vehicle stream/wetland crossings

1. INTRODUCTION

This *Public Scoping Summary Report (PSSR)* has been developed for the U.S. Air Force (Air Force), and more specifically, on behalf of the Headquarters Air Force (HAF/A7); HAF Office of Airspace, Ranges and Basing (HAF/A30); and the Eglin Air Force Base (AFB) 96th Test Wing (96 TW). It summarizes the scoping process and public scoping input received for the Environmental Impact Statement (EIS) of the proposed Gulf Regional Airspace Strategic Initiative (GRASI) Landscape Initiative (GLI) at Eglin AFB, Florida.

The purpose of the Proposed Action under the GLI EIS is to afford military operational and training flexibility by providing optional training space for nonhazardous training should hazardous activity preclude use of the Eglin Range. This would be accomplished through two types of partnerships. The Air Force would partner with the State of Florida to utilize Blackwater River State Forest (BRSF) and Tate's Hell State Forest (THSF) for nonhazardous testing and training activities as needed. In addition, the Air Force would partner with the Florida Forest Service (FFS) and the Florida Fish and Wildlife Conservation Commission (FWC) for use of associated lands for placement of temporary and mobile training radar emitters. Further details regarding the Proposed Action and its purpose and need can be found in the GLI EIS Description of Proposed Action and Alternatives (DOPAA) (Chapters 1 and 2 of the EIS). The EIS will address the Proposed Action and alternatives as well as a No Action Alternative, which provides a benchmark, enabling decision makers to compare the magnitude of environmental effects of the action alternatives.

A Notice of Intent (NOI) to prepare the GLI EIS was published in the *Federal Register* on 12 August 2013. Scoping for the EIS took place from 12 August 2013 to 12 September 2013. This *PSSR* describes the public scoping notification process and the scoping meetings, and summarizes avenues provided for public comment and public comments received throughout the scoping period. While the scoping report identifies potentially significant issues and concerns, the document does not describe Air Force decisions, nor does it set policies. Section 3 of this report summarizes the scoping issues the Air Force received through 13 September 2013, with 167 individuals and organizations submitting 1,306 comments.

2. SCOPING OBJECTIVES AND APPROACH

Scoping is a vital part of EIS planning under the National Environmental Policy Act (NEPA) of 1969, and is one of the first steps in such planning. Scoping is conducted pursuant to NEPA; Executive Orders (EOs) 11514 and 11991; Council on Environmental Quality (CEQ) regulations (40 Code of Federal Regulations [CFR] Parts 1500–1508); the Environmental Quality Improvement Act of 1970, as amended (42 United States Code [USC] 4371 et seq.); and the Air Force EIS process (32 CFR 989).

The intent of scoping is to provide ample opportunity for the public, government agencies, and other stakeholders to learn about and comment on the proposed actions and alternatives introduced in the GLI EIS DOPAA. Stakeholder comments are sought during scoping to help ensure the EIS will address significant issues and concerns important to those

who may be impacted by the GLI EIS decisions. The key elements of scoping include the following:

- It is an "early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action" (40 CFR 1501.7).
- It provides agencies with a method to determine the scope of analysis in an EIS, meaning the nature of the actions, the alternatives, and the impacts to be analyzed.
- It helps agencies "identify and eliminate from detailed study the issues which are not significant or which have been covered by prior environmental review" (40 CFR 1501.7).
- It involves federal, state, and local agencies, affected Tribal entities, the proponent of an action, and other interested persons (40 CFR 1501.7).

As described in further detail below, the scoping period was supported by public outreach materials and resources, including a project website, key messages, questions and answers, and an Air Force Public Affairs (PA) point of contact (POC). The Air Force held three scoping meetings in towns near the areas potentially impacted by the GLI. The meetings fulfill part of the Air Force scoping requirements under NEPA. Witten comments were solicited during those meetings as well as through the *Federal Register* notice, direct letters, newspaper advertisements, and the project website.

2.1 PUBLIC NOTIFICATION PROCESS

Groups, agencies, or organizations directly, indirectly, or perceived to be affected by the Air Force's implementation of the Proposed Action or alternatives evaluated in the environmental analysis were provided notification of the Air Force's intent to prepare an EIS and the upcoming scoping meetings in several ways, as outlined below.

2.1.1 Federal Register Notice of Intent

The initiation of the scoping process began with the Air Force's publication of the NOI in the *Federal Register* on 12 August 2013. This notice announced the Air Force's intent to prepare the GLI EIS. The publication of the NOI officially marked the beginning of the scoping period, during which time the Air Force accepted public comments on the scope, or range of issues, to be considered during the preparation of the draft EIS. The NOI is included in <u>Addendum A</u>, *Scoping Notification Materials*.

2.1.2 Interagency and Intergovernmental Coordination for Environmental Planning

In August, the Air Force distributed Interagency and Intergovernmental Coordination for Environmental Planning (IICEP) letters to potentially interested federal, state, and local agencies and government representatives. The Air Force also initiated Endangered Species Act (ESA) consultation via these letters. Included as an attachment to the IICEP letter was a map of the proposed emitter sites and Blackwater River and Tate's Hell state forests, and a

flyer advertising the scoping meetings. The IICEP letter, attachments and distribution list are provided in <u>Addendum A</u>.

2.1.3 Scoping Advertisements, Press Releases, and Public Service Announcements

Approximately two and three weeks prior to the scoping meetings, the Air Force distributed newspaper advertisements in areas potentially impacted by the GLI to announce its intent to prepare an EIS and the associated scoping meetings. Newspaper publication dates are shown in <u>Table 2-1</u>. A copy of the newspaper display advertisement is contained in <u>Addendum A</u>.

Table 2-1. Newspaper Advertisement Dates

Newspaper Publication	Release/Publication Dates
Northwest Florida Daily News	Friday, 9 August 2013 and Saturday, 17 August 2013
Pensacola News Journal	Friday, 9 August 2013 and Friday, 16 August 2013
Apalachicola Times	Thursday, 15 August 2013 (online) and Thursday, 22 August 2013
Panama City News Herald	Friday, 9 August 2013 and Friday, 16 August 2013
Tallahassee Democrat	Friday, 9 August 2013 and Friday, 16 August 2013

2.2 WEBSITE

The Air Force established a project website, http:///www.grasieis.leidoseemg.com, to notify the general public of the scoping meetings and Environmental Impact Analysis Process (EIAP) via the Internet. The website also accepted public scoping comments. The scoping brochure, developed for the scoping meetings, was posted to the project website prior to the meetings and the scoping presentation was posted shortly after the meetings. A project announcements tab announced the scoping meeting dates and locations and the close of the scoping period, and it informed the public that the draft EIS was anticipated to be available for public and agency review early in 2014. The website also linked to the GRASI website as well as other relevant Air Force websites.

2.3 POINT OF CONTACT

Public comments were directed to the GLI EIS POC: Mr. Mike Spaits, Eglin AFB Public Affairs Office, 96th Test Wing/Public Affairs [96 TW/PA], 101 West D Avenue, Room 238, Eglin AFB, Florida 32542-5499; phone (850) 882-2836. The Air Force distributed the POC information to the interested/affected public using the notification methods described above and during the scoping meetings.

2.4 SCOPING MEETINGS

The Air Force held three scoping meetings, near BRSF and THSF. The dates and locations for those meetings are included in <u>Table 2-2</u>, along with the number of meeting attendees and verbal and written comments received. All scoping meetings were held from 6:00 PM to 8:00 PM. Copies of the general meeting layout, the scoping fact sheet, logistical signs, poster

displays, the Air Force presentation, and the meeting sign-in sheets are provided in Addendum B.

Table 2-2. Scoping Meeting Dates, Locations, Attendance, Comment Submittals, and Recognitions

			- · · · · · · · · · · · · · · · · · · ·		
Date	Location	Number of Persons Signing In	Number of Written Comments Received	Number of Speakers	Recognitions
27 August 2013	Milton Community Center, Gracie Room 5629 Byrom Street Milton, Florida	23	1	5	Representatives of the Florida Forest Service (FFS), Francis M. Weston Audubon Society, Florida Department of Transportation (FDOT) Aviation, Economic Development Council of Okaloosa County, Tri-County Defense Support Initiative, and Western Gate Chapter, Florida Trail Association
28 August 2013	Blountstown Civic Center 17773 NE Pear Street Blountstown, Florida	9	0	0	Representatives from FDOT Aviation, FFS, The Nature Conservancy, and Florida Trails
29 August 2013	Apalachicola Community Center 1 Bay Avenue Apalachicola, Florida	91	2	11	Representative from U.S. Representative Steve Southerland's office; Representative Halsey Beshears; Cheryl Sanders, Franklin County Commissioner; Betty Webb, Apalachicola City Administrator; Tana Creek Reservation, Lower Creek Indian Reservation; City of Carrabelle; FDOT Aviation; Florida Wildlife Conservation; Florida Dog Hunter Association; Carabelle Cares; Carabelle Economic Development Council; and the Florida Geotourism Association.

The meetings began with a 30-minute open house. Meeting attendees were asked to sign in and asked if they would like to sign up to provide verbal comments. Resource specialists staffed poster stations and were available to the public to provide information, answer questions, facilitate identification of issues and encourage public involvement.

Seven poster display stations covering the EIS process, the Proposed Action and alternatives, and resource areas anticipated to incur impacts were available for review:

- Display 1: NEPA Process and How to Comment
- Display 2: GRASI Background
- Display 3: GLI Description and Purpose and Need

- Display 4: GLI Proposed Training Activities
- Display 5: GLI Proposed Training Locations
- Display 6: GLI Proposed Emitter Locations
- Display 7: Resource Areas for Environmental Analysis

A four-page fact sheet with more-detailed information than the posters was provided to interested attendees. Comment forms were available for participants to provide written comments.

The Air Force gave a brief presentation following the 30-minute open house. The presentation duration was approximately 20 minutes for the Milton scoping meeting and approximately 30 minutes for the Blountstown and Apalachicola scoping meetings due to the addition of introductory remarks. Verbatim copies of the presentation are contained in Addendum C, Scoping Comments and Transcripts, within the meeting transcripts.

Mr. Mike Spaits welcomed participants and provided introductory remarks, an explanation of scoping and an overview of NEPA. Mr. Tom Tolbert then provided information on the Proposed Action and alternatives, why they are needed and how they were established by the Air Force. Mr. Spaits identified the environmental resource areas to be evaluated in the draft EIS as well as the anticipated schedule, and wrapped up the presentation by explaining the methods for commenting verbally and in writing and opening up the floor to verbal comments.

After the Milton scoping meeting showed that the public was misinterpreting the level of use proposed for the state forests, the Air Force added opening remarks for the remaining meetings. At the Blountstown and Apalachicola meetings, Col. Shawn Moore provided opening remarks clarifying that the Air Force was not conducting a land grab and introduced Mr. Michael Penland, the Air Staff proponent from the Pentagon. Mr. Penland explained some of the history behind the GLI, in particular that the Air Force initiated communication with the FFS regarding if there were areas available and compatible with the proposed training. He emphasized that the intent was to cause no impacts and that the Air Force made it clear to the FFS that if there were any areas that could not be used because of hunting or other activities, the Air Force would not consider those areas. Mr. Spaits and Mr. Tolbert then proceeded with their portions of the presentation, as conducted in Milton.

Following the Air Force presentation, there was a 5- to 10-minute break allowing individuals to sign up to speak. The public then had an opportunity to provide public testimony transcribed by a court reporter. Given the limited numbers of persons signed up to speak at the scoping meetings, no time limits were set regarding the amount any given speaker could provide comment. Members of the public were also encouraged to provide written scoping comments on sheets provided at the meeting, by mail after the meeting, through the project website at www.grasieis.leidoseemg.com, or by providing verbal comments directly to the court reporter in private. Copies of the meeting transcripts, including verbatim verbal comments from the public, are contained in Addendum C along with copies of the written comments submitted at the meetings and on the website.

After the scoping meetings closed, the scoping support staff debriefed and a record was made of the number of meeting attendees; any federal, state, or local representatives in attendance; media interactions; and issues raised and discussed. Section 2.5 summarizes

media coverage during and after the scoping meetings. Section 3 provides a summary of scoping comments captured throughout the entire scoping period.

2.5 MEDIA COVERAGE

This section summarizes the media coverage of the GLI EIS during and after the scoping meetings. Copies of news articles, including WMBB news coverage and coverage by the *Tallahassee Democrat* and the *Panama City News Herald*, can be found in <u>Addendum D</u>, *Scoping Media Coverage*.

- **27** August 2013 Scoping Meeting in Milton, Florida at the Milton Community Center: There were no media representatives identified at the meeting and no interviews were conducted.
- **28 August 2013 Scoping Meeting in Blountstown, Florida at the Blountstown Civic Center:** There were no media representatives identified at the meeting and no interviews were conducted.
- **29** August **2013** Scoping Meeting in Apalachicola, Florida at the Apalachicola Community Center: Representatives of the Apalachicola Times and WOYS100.5 were present, along with the stations interviewing, as noted below.
 - Fox49 interviewed Mr. Michael Penland prior to the scoping meeting; he clarified that the Air Force was looking for compatible, already developed state park areas to serve as a "relief valve" for nonhazardous Air Force training.
 - WMBB of Panama City interviewed Mr. Mike Spaits (96 TW/PA) who explained the Proposed Action and clarified that it was not a land grab.

3. SYNOPSIS OF PUBLIC COMMENTS

The following section represents a summary by resource area or EIS topic of the public comments provided during the public scoping period at the scoping meetings or in writing to the EIS POC. Development of the comment summaries began with a review of each comment for content by the EIS contractor. Key issues were identified and the comments categorized by EIS topic, such as purpose and need, Proposed Action and alternatives, and suggested new alternative, or resource area, such as socioeconomics, noise, transportation, biological resources, etc.

Many of the comments concerned more than one topic and/or resource area. These comments were categorized in all relevant actions/topics to ensure their full consideration during EIS preparation. In addition, some commenters provided written as well as verbal comments. Accordingly, the number of comments received is greater than the number of individuals and organizations commenting. For the GLI EIS, 167 individuals and organizations submitted 1,306 comments and requests for information. They are summarized in Table 3-1.

Table 3-1. Scoping Comment Synopsis

Table 3-1. Scoping Comment Synopsis					
	Number of	Percentage of Total			
Category	Comments	Comments Received			
Airspace Management and Use	53	4.06			
Air Quality	0	0.0			
Biological Resources	318	24.35			
Cultural Resources	3	0.23			
Cumulative Impacts	6	0.46			
Environmental Justice	8	0.61			
General	34	2.6			
General Opposition (Opposed to proposed actions)/No Action Alternative should be chosen	38	2.91			
General Support (In support of proposed actions)	4	0.31			
Solid Waste and Hazardous Materials	14	1.07			
Infrastructure and Transportation	5	0.38			
Land Use and Recreation	177	13.55			
NEPA Process	59	4.52			
Noise	68	5.21			
Proposed Action	230	17.61			
Purpose and Need	12	0.92			
Physical Resources (Soils)	16	1.23			
Safety	36	2.76			
Subsistence	23	1.76			
Socioeconomics	115	8.81			
Water Resources	87	6.66			
Totals	1306	100			

3.1 SUMMARY OF COMMENTS BY RESOURCE AREA

Comments related directly to the EIS resource areas are included to ensure that comments are considered for applicable topic areas during draft EIS preparation. Comments have been organized by resource area and are summarized in <u>Table 3-2</u> along with tallies of direct references to THSF or BRSF.

Table 3-2. Summary of Comments by Resource Area

Consolidated Summary	THSF	BRSF
AIRSPACE MANAGEMENT AND USE		
Opposition to any restrictions on airspace or access to state forest grounds by the public or general aviation. Specific concerns:	17	23
• Concern about impacts to the recreational airfield at Blackwater Airfield (8FD3), identified as Munson Airfield, as it provides a rare capability for general aviation pilots to enjoy state parks; specifically the Recreational Aviation Foundation (RAF), which did a lot of groundwork with the Florida Forest Service (FFS) to reopen the airstrip for general aviation use.		
• The Aircraft Owners and Pilots Association (AOPA) requests that training activities be coordinated with the general aviation community in a timely fashion and not significantly interfere with the usage of 8FD3; utilize the Federal Aviation Administration's (FAA's) Notice to Airmen (NOTAM) system; and coordinate with the BRSF Supervisor to ensure that general aviation pilots and aircraft are not inadvertently involved in a training event.		
Requests that the Air Force take over the scheduling of the Blackwater Airfield and enable the public		

Table 3-2. Summary of Comments by Resource Area, Cont'd

Consolidated Summary	THSF	BRSF
to know when the Air Force is going to use it and when the public can; note FFS uses this airfield for fire suppression and allows general aviation aircraft to use it, but only once or twice a year; ensure equivalent public and Air Force access to this airfield.		
Concern about private pilots landing at local airports having to give priority to military aircraft.	20	-
Request for details on how potential aircraft conflicts from increased military usage will be addressed, as much of the proposed aircraft activity will occur within the altitudes generally used by civilian aircraft on local flights.	2	1
Request that the Air Force avoid any consideration of future Military Operations Area (MOA) or Restricted Airspace expansions or increases.	1	3
Concern that military radar/emitter installations, whether mobile or fixed, may disrupt civilian and private pilot communication.	1	-
BIOLOGICAL RESOURCES		
Concern about impacts to biodiversity, "over 90 species of rare and endangered wildlife," other threatened and endangered animals and plants, corridors, uplands, wetlands, habitat, the riparian zone, state-owned conservation lands, and feeder waters to the East Bay System, specifically for the bears, wolves, bobcat, deer, whitetails, Florida puma (possibly), squirrels, razorbacks, alligators, several species of snakes, fish (and those that eat fish, specifically where ditch fishing occurs), ivory-billed woodpecker (if it still exists in the Blackwater area), red-cockaded woodpecker, bald eagles, birds, ducks, gopher tortoise, turtles, oysters, scallops, insects, butterflies, dragonflies, rare orchids, carnivorous plants, longleaf pine ecosystem, pitcher plant prairie bogs and seeps (specified to be designated "off-limits" in BRSF), dwarf cypress and dwarf cypress swamp (as it "exists no where else"), other plant species, and "thousands of yet defined species with untold benefits to mankind living in this swamp." Specific concerns in BRSF for the following species: four fish species (blackmouth shiner, blacktip shiner, Florida chub, and gulf sturgeon); five amphibian species (pine barrens tree frog, dusky gopher frog, Florida bog frog, tiger salamander and flat woods salamander); four species of reptiles (eastern indigo snake, gopher tortoise, alligator snapping turtle, and Florida pine snake); 10 plants (piedmont jointgrass, panhandle lily, hummingbird flower, Chapman's butterwort, small-flowered meadowbeauty, white-topped pitcher plant, Wherry's sweet pitcher plant, chaffseed, Chapman's yellow-eyed grass and mountain laurel); eight aquatic insects (blue sand-river mayfly, Dolania mayfly, diminutive clubtail, Towne's clubtail, Peters' little sister sedge, zigzag Blackwater River caddisfly, Say's spiketail dragonfly and Leuctra stonefly); 33 species of dragonflies and damselflies; 42 species of mayflies; 21 species of stoneflies; 24 species of caddisflies; 3 species of Dobsonflies and fishflies; 12 species of t	117	59
Concerns arise from consequences of the Proposed Action that may result in fragmenting the forest; dispersing THSF wildlife species, as they have nowhere else to go; severe fuel exhaust (from the low-flying [tree-level] helicopters); low-level flight noise; amphibious maneuvers; the preparation and maintenance of emitters; landing areas; Drop Zones; the building of airstrips; day-to-day operations; traffic (from supplies, equipment, and military personnel entering/leaving wildlife areas); ongoing training; the use of radar; vehicles; all-terrain vehicles; off-road vehicles (ORVs); troops; foot traffic; military accidents; bulldozing; commercial usage; housing; wetland crossing exercises; blackout driving; erosion of creek or river banks; the disruption of dark skies at night; noise; clearing activities; and the cut/fill dirt required for road construction or airstrip construction/design improvements in the wet areas.		
Concern about the serious consequences of the proposed actions given the unique and valuable habitat, "one of the most bio-diverse bionomes in the world." Notation that BRSF is one of the most valuable state properties in terms of unique ecological value, both in housing many rare and endemic flora and fauna as well as connecting the forests of Eglin Air Force Base (AFB) with those of Conecuh National Forest in adjacent Alabama. "All combined, these three properties form the largest contiguous tract of remaining longleaf pine forest." Notation that the Florida Forest Service (FFS) is failing to achieve their purpose of protecting Florida's most sensitive areas. Concern that no matter what an EIS concludes, any impact is too great and cannot be mitigated.	15	3
Concerns about noise impacts on ecosystems and a request to explain how the Air Force will protect biological resources from noise; specifically regarding bears, rare carnivorous plants, breeding habits, and disruptions to the life cycle of river frogs and "untold other species."	4	1

Table 3-2. Summary of Comments by Resource Area, Cont'd

Consolidated Summary	THSF	BRSF
Remark that the proposed actions and alternatives will make a positive impact by opening up areas for wildlife to use.	-	-
Notation that the Air Force increased public access to the interiors of larger blocks of land by creating roads into the Apalachicola National Forest due to a military aircraft crash, which created a great disruption to the serenity of the forest as well as ecological damage.	1	-
Request that the effect on the forest ecosystem as a whole be assessed and an in-depth analysis of impacts from night operations be completed. Notation that night operations, as a result of increased noise, lights, and vehicle, aircraft, and personnel movement, disrupt ecological functions on a large scale, including bird and animal feeding, breeding, migration and movement cycles, reproduction, offspring rearing, etc.	21	3
Concerns about the reversal of decades of conservation efforts, including swamp conservation efforts. Notation that the original purpose for converting the Tate's Hell tract from county property to state-owned forest was conservation: "(2) to conserve many rare and endangered habitats and species of flora and fauna found within the fragile Tate's Hell State Forest environment." When THSF was created, it was promised to be restored to natural conditions and great effort has gone into beginning that process, including removing roads and restoring the hydrologic flow, vital for the health of the Apalachicola River and the Gulf of Mexico.	47	24
A Nature Conservancy staff member remarked that for many years, the Gulf Coastal Plain Ecosystem Partnership (GCPEP), a collaborative group of agencies and nongovernmental organizations (NGOs) worked hard to openly discuss various missions with the Partnership who had enrolled their contiguous lands (totaling 1,050,000 acres) as wildlife corridors and habitat for the multitude of species that are year-round residents, migrants, or transient in this last remaining sliver of habitat. "Understanding each agencies charge, while working together to manage the landscape brought trust and success to this area through healthier uplands and aquatic systems."		
Other commenters noted the area has benefited from public funds devoted to conserving the rare and endangered species that depend on the fragile environments of the state forests, but continued care and continued restoration efforts are needed. Even with past efforts, Apalachicola Bay, the oyster industry, and the entire estuary are currently in a perilous condition.		
The FFS website clearly states, "The natural resources found on Tate's Hell State Forest are very diverse due to the unique and various natural community types. At one time Tate's Hell State Forest supported at least 12 major community types which included: wet flatwoods, wet prairie, seepage slope, baygall, floodplain forest, floodplain swamp, basin swamp, upland hardwood forest, sandhill, pine ridges, dense titi thickets and scrub. Currently, the forest contains approximately 107,300 acres of hydric communities such as wet prairie (contains a vast diversity of plant species), wet flatwoods, strand swamp, bottomland forest, baygall, and floodplain swamp. Past management practices have disrupted the function of the natural ecosystems on Tate's Hell State Forest. The restoration of these ecosystems is a primary objective of the Florida Forest Service." It is not clear how the Gulf Regional Airspace Strategic Initiative (GRASI) as it relates to THSF can be pushed forward without impacting the primary objective of the FFS.		
Inquiry if military operations will take precedence over forest management.	-	1
Comment that the Air Force is to be commended for good programs, like saving the stands of long-needle pine.		
Audubon Florida's review concluded that elements of the Air Force proposals are far-reaching, expansive, and overly intrusive in the natural environment of both state forests. Audubon Florida considers BRSF and THSF to be among Florida's premier ecological assets. They believe that conducting military training exercises in these areas would require extraordinary care, detailed natural resource—oriented planning and scrupulous monitoring.	1	1
Concern that emitters would have a negative health consequences on birds, wild animals, and domestic farm animals (food/milk producers), or impact wildlife patterns. Request for the Air Force to provide information on the studies about the effects of emitter sites on wildlife.	4	-
Notation that THSF has one of the largest black bear populations in Florida, as well as a very large population of nesting American bald eagles.	16	-
Concern about the bear population since Florida's Bear Management Plan utilizes THSF to be set aside for the bears. Commenter stated that if we lose even one acre to a military footprint due to the military	2	1

Table 3-2. Summary of Comments by Resource Area, Cont'd

Consolidated Summary	THSF	BRSF
presence, the bears are displaced from these training areas; that would mean that nearby towns, such as Carrabelle and Eastpoint, will see an additional population increase to their bear problem, not to mention the nearby residents that live on three sides around THSF, already burdened by the local bear population.		
Concern about impacts on the deer population from the increased military incursion into their habitat which will disrupt their lives both day and night. Specifically, the resulting impacts military training would have on the over-harvested younger-aged class of bucks. Notation that the 2014–2015 deer seasons in northwest Florida proposed an antler restriction, using Interstate 10 as a dividing line.	1	
Concern initiative will further concentrate the deer herd into smaller areas, resulting in both reducing the available food source and creating an environment for disease, which will eventually spread to other animal species.		
Notation that one of the contributing factors to chronic wasting disease is crowding many deer together. This disease not only spreads from close contact with infected deer but contaminates any area that a deer has eliminated his bodily waste in where it will precipitate both in nearby vegetation and water until another unaffected deer just happens to drink or feed. To make matters worse there is an increasing problem with bears and coyotes preying on deer. If an animal feeds on an infected deer, that animal now becomes a carrier and anywhere that animal eliminates his bodily wastes, the nearby vegetation and water also becomes infected.		
Concern about impacts to birds and their habitats and studies that count/document them. "For a number of years I have done a nightjar survey (chuck-will's-widows and nighthawks – types of birds that are active at night) on one of three nights right around the full moon in May. The count does not start until the moon clears the tall pines so we usually don't start until 10 PM. During these counts anywhere from 10 to 15 vehicles usually pass us. One year we almost had to give up the count because low flying planes were passing over head over and over on their way to drop bombs somewhere. They did stop just before we abandoned our count. The results of the count are compiled internationally to track the population of these birds. I have never been worried about conducting this survey, but if I thought folks with guns would be doing night activities, it would make me think twice about doing the count. Breeding bird surveys and Christmas Bird Counts (all have been done for years and years) occur during the other seasons of the year. Data are compiled internationally also and supply important data about bird populations and changes."	-	1
Concern about impacts to the migratory patterns of birds and other animals routes including butterflies, and dragonflies. The Florida panhandle is a resting/fueling ground for birds both before and after they make their journey across the Gulf of Mexico, typically in the spring and fall. Specific concerns about the migratory corridor to and from breeding grounds for those species considered threatened or at risk by federal standards, and their wintering habitat for other species of birds that do not migrate past the coastal plain.	2	4
Francis M. Weston Audubon Society requested that the EIS investigate impacts on endangered birds, all resident birds, all migratory birds and the burning schedules that maintain the wiregrass ecosystem. Specific information on bird conservation efforts, concerns and data was included in their letter, including concern that military use of clear-cut areas would preclude the return of the American kestrel and its recovery as a species, and that the numbers of migratory birds that utilize the Florida panhandle to rest after long migrations are declining rapidly.	-	1
Commenter has observed seven species of native orchids in May; swallow-tailed kites and a great variety of other birds were nesting from early spring through June and even July; foraging black bears in July eating blackberries; butterflies from August through October; and many rare, threatened and endangered plants flowering from August through October. They attached maps from FFS showing the "hot spots" of rare plant life in THSF and lists of all the threatened, endangered and species of special concern inventoried in THSF and BRSF.	1	1
Concern about traffic pressure, repeated missions and clearing of land for training impacts on butterflies and their habitats. "For 15 years I have been studying <i>lepidoptera</i> on Eglin Air Force Base Reservation and Blackwater River State Forest. I have made numerous discoveries of rare and imperiled butterflies in both of these lands in Okaloosa County, Walton County and Santa Rosa County. As a Citizen Scientist working privately and sharing research data with the State of Florida Dept of Forestry and with Jackson Guard I have seen first hand the rich diversity and unusual concentration of wildlife contained in these tracts. In recent studies undertaken by FNAI [Florida Natural Areas Inventory] and citizen volunteers under a FWC	-	1

Table 3-2. Summary of Comments by Resource Area, Cont'd

Consolidated Summary	THSF	BRSF
[Florida Fish and Wildlife Conservation Commission] Wildlife Grant, these two areas have been deemed to hold the highest concentration of S1 and S2 species of butterflies in the state. Already over the years there has been an obvious degradation occurring in the Forest and the Reservation due to habitat loss and the growth of the Air Force Missions."		
Comment that scoping maps appear to have a majority of activity in the wildlife management Hutton Unit. "This area is very stressed due to anthropogenic activities and illegal dumping over the years. Our on-going monitoring of this area has shown a small amount of improvement since steps have been taken to alleviate stressors. The AFB activities may reverse this trend."	-	1
Request for details on how GRASI operations will affect the burn program schedules in the forest. "The weather, seasons, hunting schedules, and breeding periods must now be considered. Burning is crucial to maintaining the health of the forest and safety of the residents. The forests depend on fires that renew the forest. The timing is important and cannot be controlled by when military activities need to take place."	-	2
"For military activities that include survival skills involving eating plants and animals, how will soldiers be able to distinguish listed species from other common species and know how to protect the environment?" Inquiry regarding how troops will know that they are in a pitcher plant area or a wetland with protected species.	2	3
Reference to USACERL Technical Report 98/79 May 1998, entitled <i>Management of Maritime Communities</i> for Threated and Endangered Species, by Sophia Gehihausen and Mary G. Harper. It describes the detrimental effect of foot and vehicular traffic on soil compaction and hydrology on sandy maritime dune ridges, swales, and wetlands, such as those found in THSF. "Training activities with ORV usage in areas such as these must be extremely limited."	-	-
Commenter includes Florida State University inventory list of rare and endangered species found in THSF.	1	-
Commenter includes map of THSF's plant and high-quality natural area hotspots.	1	-
Inquiry if the Air Force will adjust their activities according to important wildlife preservation issues (e.g., bald eagle "mating and raising their kids season").	1	-
Concern that mitigation measures would impact the environment when put in place.	1	1
Inquiry as to what funding the Air Force can bring to the table, such as credits or programs that will help provide for restoration and preservation of the Apalachicola River and Bay.	-	-
CULTURAL RESOURCES		
Concern about impacts to the primitive campsites.	1	-
Statement that people hunt arrowheads in state forests and there is evidence of burial mounds and a history of Indians. Statement that the government took 1,500 acres from the Indians to resolve a debt and therefore the numerous Native Americans in the area feel that the government took their land and that it is their home.	•	-
The Advisory Council on Historic Preservation (ACHP) set forth Section 106 consultation requirements regarding historic properties	-	-
CUMULATIVE IMPACTS		
Concerns about impacts from potential future growth, development, and encroachment as the military installation become overcrowded.	2	1
Concerns about the cumulative impact of disturbing the land.	1	-
Concerns about the extent which the military use/activities would escalate over time.	1	-
ENVIRONMENTAL JUSTICE		
Conserve everything these state forests for future generations to enjoy and cherish.	5	4
Concern about safety impacts from unexploded munitions on children.	2	-
Concern about severe impacts to areas available for children to experience tree-climbing, bug-biting, and exploring. "Children do not develop right if they are inside all the time. They come out weak and allergic to everything. They need natural playgrounds."	1	1
GENERAL Chateman with satisfactors and the state of stat	. 10	0
Statement that it is possible to provide national security without the destruction of state lands.	12	3
Support for the military and hopes that it will tread lightly on state forests under this plan.	3	4
Remark that the AFB can be very good stewards of the environment.	1	1
Remark that the military has a very poor track record of environmental awareness and/or care.	1	1

Table 3-2. Summary of Comments by Resource Area, Cont'd

Consolidated Summary	THSF	BRSF
Notation that the mission statement for the BRSF is to "protect Florida and its people from the dangers of wildfire and manage the forest resources through a stewardship ethic to assure they are available for future generations." "This was the mission for years, then in early 2013, the following was quietly added to the mission, 'Cooperate with the United States military to facilitate mission essential training in a manner that does not adversely impact natural resources, forest management, or public access.""	-	1
Notation that the management plan for the forest does not include military training, but does include the	1	-
 following: To restore, maintain, and protect all native ecosystems; To ensure the long-term viability of populations and species considered rare, endangered, threatened, or of special concern; To integrate human use through a total resource concept, not emphasizing any particular use over the others, or over restoration, maintenance and protection of native ecosystems; To protect known archeological and historical resources; and To practice sustainable forest management utilizing sound agricultural techniques. 		
Statement of distrust for the Air Force after a two-year battle to stop the Air Force from siting a bombing range/missile range/military training area in Taylor County, a few years ago.	-	-
Statement that "If congress was wrong to approve the BRAC [Base Realignment and Closure] proposed moves to EAFB [Eglin Air Force Base], as well as the addition of the F-35 program, Florida should not have to pay for congress' miscalculations by giving up integrity of, and access to some of its best remaining treasures." Notation that it appears the planning was very poor in selecting these two areas and commenters tax	1	1
dollars were not wisely spent.		
Statement that "the Air Force should be ashamed of the violence your duplicitous bureaucratic jargon does to the English language."	-	-
Request to "preserve the best features of our country in order to protect our country." "When Winston Churchill heard that Parliament was proposing a cut to funding for the arts in order to boost military spending, he replied, 'Then what's the point?' This applies here."	1	-
Request for the Air Force to document the controls and monitoring procedures that will be used to ensure compliance with the mitigation procedures stipulated in the EIS for the activities in the BWSF and THSF. "If an agency other than DOD [the Department of Defense] will perform this function document how the agency budgets for this activity and that agency's authority to perform enforcement functions. If the Agency proposed to perform this function has no enforcement authority, so state."	1	1
SOLID WASTE AND HAZARDOUS MATERIALS		
Concerns about the military's ability to adequately clean up and dispose of waste based on past history; request that if anything is damaged, like an aircraft crashing, the site be cleaned up.	4	1
Concern about cleaning up damage caused by military activities where the more activity in the forest increases the potential for damage, particularly from enduring or long-term military fuel spills on the natural area; harmful chemicals used during training; fire; or aircraft fuel dumping in an emergency. Specific guidance to fight any fires started, clean up oil and fuel spills, keep military vehicles out of BRSF (due to poor fuel efficiency) and monitor trash disposal.	3	5
Concern about the impacts of exploded ordnance/ammunition on peoples' health and the environment; opposition to dropping shells.	1	-
Concern that the scoping map appears to have a majority of activity in the Hutton Unit, which "is very stressed due to anthropogenic activities and illegal dumping over the years. Our ongoing monitoring of this area has shown a small amount of improvement since steps have been taken to alleviate stressors. The AFB activities may reverse this trend."	-	1
INFRASTRUCTURE AND TRANSPORTATION		
Concern that paved and unpaved road maintenance costs will increase due to higher volume of heavy vehicle traffic, where there is already a limited budget.	1	-
Concern about infrastructure being damaged and altered.	-	-
Concern about impacts from the construction of new roads.	-	-
Request for the Air Force to clarify where electrical power and fuel tanks would be installed.	-	-

Table 3-2. Summary of Comments by Resource Area, Cont'd

Consolidated Summary	THSF	BRSF
LAND USE AND RECREATION		
Concerns about impacts upon local and visitor recreational pursuits, such as walking, hiking, water sports, camping, bird watching, photography, nature loving, relaxing, swimming, fishing, canoeing, kayaking, hunting, enjoying the last remnants of Old Florida, visits to the Great Florida Birding Trail, light disruption to dark/night skies, horseback riders (concern that binding would be disrupted), Coldwater Recreation Area, Great Florida Birding Trail, being out just before sunrise, tubing, water rafting, wildlife watching, nature trails, ditch fishing, family reunions (70-year history), peace and quiet, hog hunting, paddling/camping the complete Ochlockonee river, spending a total of several weeks.	66	40
Concerns arising particularly from noise; restricting public access to meadows, swamps, creeks, rivers, beaches or bays; game displacement to concentrated areas due to noise thus overburdening hunting areas; interfering with hunting or limiting or prohibiting public access to state-designated camping areas along New River in THSF north of Gully Branch Road (used by hunters) as these seven campsite areas fall within one to three miles of one of the proposed airstrips.		
Concern about impacts from night training exercises and that activities scheduled to avoid hunting seasons will impact camping in the forest during non-hunting season. Concern that the military presence (vehicles and air traffic), both night and day, along New River in THSF north of Gully Branch Road (near and adjacent to the campsite areas) would disturb the wildlife, resulting in a direct impact on the camper hunters in finding game.		
Statements that Air Force training maneuvers in the state forests are totally incompatible with protection of them. "THSF, in particular, which represents over half of the land in Franklin County, was removed from the tax rolls and set aside to PRESERVE, PROTECT, and CONSERVE natural resources for the benefit of the public." Notation that "the original purpose for converting the Tate's Hell tract from county property to state-owned forest included creating a wildlife refuge and preserving traditional and recreational uses of the land by the citizens whose tax monies were used for establishing this State Forest. State forests were purchased by the state with Conservation and Recreation Lands (CARL) Program funds. The area has been protected at an enormous cost to the people who have opted to preserve the area, keeping building and development at bay, which now attracts people. This land was given to the forest service to maintain in order to preserve it. It is designated for the public use not the military." A significant portion of the lands affected by this proposal were acquired under environmental land acquisition programs such as Preservation 2000, or Florida Forever, using funds appropriated and/or produced by bond sales which have specific land conservation covenants attached. While compatible uses may be considered, commenters believe that the purpose and function of these tracts must remain primarily dedicated to the conservation purposes for which they were acquired. Statement that one of the state forest missions is "to provide for resource-based outdoor recreation opportunities" and there is no mention of military mission.		
Statement that the proposed actions and alternatives will make a positive impact by opening up access and	1	-
Areas for people to use the area. Notation that the state forests are heavily used all year, night and day by area residents, including retired citizens, as well as visitors. "People use the forest night and day 24/7 - 365 days a year. I cannot imagine how coordination of undisclosed (so far) numbers of military activities will fit with these activities."	3	2
Concern that seeing military personnel training will disturb the visual quality/environment when recreating. Specific reference to a 70-year-old family camp deep in the woods at THSF.	2	1
Request that users must all be kept informed with the latest information about the dates of any proposed training activities within the two state forests so that they can find alternative recreational sites if necessary.	3	2
Concern about "access impacts from not getting advanced and visible of notification of restricting/barracading areas for military use. For long-term (2-5 days) recreation and hunting activities, campsites are setup one to two days in advance of activities. Imagine this scenario: You worked all week. You have planned and prepared. You stayed up late Wednesday and Thursday nights moving in your camper and setting up a pristine campsite in anticipation of a beautiful family weekend adventure. After you get off work on Friday and get everybody gathered up and drive to your campsite at the turnoff of the paved road there is a roadblock and you're informed that this area is closed to public access for the next two weeks. So you have to turn around and go home disappointed while your camper and other possessions just sit there at the campsite. Hopefully, your possessions are safe; but you never know."		

Table 3-2. Summary of Comments by Resource Area, Cont'd

Consolidated Summary	THSF	BRSF
Concerns about restrictions to land access via air or ground, particularly Munson airstrip and its associated campground/recreational facilities. Inquiry if visitors will have the freedom to make impulsive forays into the forest. Concern about military use deterring public use of state forests where hikers already have to exercise vigilance during hunting season and the added danger of military exercises using live ammunitions.	3	9
Concern about impacts to public access. Commenter sees no way to know exactly when people are likely to be in any one particular area of the forest or how the military can inform persons who may want to spontaneously go camping.		
Statement that any closure of public lands, however temporary, is unacceptable.		
Notation that public access is already restricted when fire is there (a necessary routine) and see the proposed actions and alternatives as another block of time when public access will not be allowed to portions of this publicly owned space.		
Concern about impacts to hunting as it has specific time and date restrictions.		
Statement that if state parks and forests are restricted in any manner from use by the general public then these areas in effect become military bases, and are no longer state parks or forests.		
A member of the Franklin County Dog Hunters Association is concerned that access to Buck Siding will be restricted, which is used by the dog hunters when there is a storm, as an escape route.		
Concern about "impacts on people who crave the freedom and beauty of wild places such as the Blackwater River State Forest. The very things that make Florida a wonderful place to live and visit are under great strain from shortsighted development and human activity. Without an aggressive effort, Florida will cease to be the very thing that makes it such a special place."		
Request that the impact analysis of training operations, especially night operations, must include the effect on forest users including campers, backcountry campers, hunters, hikers, canoeists, horseback riders, bicyclists, birdwatchers, and all traditional users.	1	1
Concern about impacts to the private land owners who own inholdings.	-	1
Statement that "Eglin AFB has been planning mission expansions for their base operations for the past 10 years. Eglin should have been buying more land; adjacent land for these maneuvers, instead of giving land away for sewage spray fields, allowing subdivisions to encroach on their boundary, and permitting highways through their range."	-	1
Oppositions to encroaching on public land.	4	4
Request that the Air Force encourage and enhance multiple use in a manner that is agreeable with other	-	1
long-term goals, especially protection of native ecosystems. Request for the Air Force to analyze and present the changes to the local building codes such as building height restrictions that will be required at each of the selected 12 emitter sites.	1	1
Concern about impacts to the Great Florida Birding Trail, which "is visited by birdwatchers, photographers, nature lovers, hunters, fishermen, local residents and tourists from far away."	1	-
Concern about impacts on forestry activities, including prescribed burn thinning, timber sales, and harvesting.	-	-
Commenter provided a map showing all the camp grounds throughout the forest as well as numerous boat ramps in THSF and BRSF.	1	1
Statement that the proposed use of the existing "camps" appears to be the only reasonable available resource for military use in this area.	-	1
The Western Gate Chapter of the Florida Trail Association has concerns about impacts to the Florida National Scenic Trail, a 1,300-mile foot path that begins at Fort Pickens in Gulf Islands National Seashore, goes all the way across the Panhandle and down the peninsula to Big Cypress Nature Preserve down by Miami. The Association plans trail activities six months in advance, mainly on weekends, and trail maintenance on Thursdays. Two of their key land partners are Blackwater River State Forest and Eglin AFB. The group offered to provide the GIS data for the Florida Scenic Trail through the U.S. Forest Service, or information needed about where the actual trail route is located.	-	3

Table 3-2. Summary of Comments by Resource Area, Cont'd

Consolidated Summary	THSF	BRSF
Concern about "impacts to the Fish and Wildlife conservation commission's plan that determines visitor experiences on public lands."	-	-
NEPA PROCESS		
Comment that there hasn't been an opportunity to have a respectful dialogue about this EIS and that the window of opportunity to comment is too short. Dislike that during the scoping meetings, the public was not allowed to ask questions. Remark that any questions asked at the scoping meetings were ignored. Concern that scoping meetings led people into a false sense of acceptance of the Proposed Action and alternatives.	18	2
Concern that citizens don't get to vote on the proposal, that citizens aren't compensated for giving up access to state parks and forests, and that a decision has already been made. Opinion that the public should have a right to decide what this public land should be used for. Request that the Air Force "truly listen to and consider our concerns."	3	2
Comment that there was not enough advance notice about the scoping meetings and concern about the lack of publicity. Request for an explanation in the DEIS as to why no public scoping meetings were held near Eglin AFB since it is an Eglin initiative, as indicated by the title.	3	1
Concerns about segmentation. Request for Air Force to "provide justification that the analysis of only the non-hazardous training activities is not piece-mealing the NEPA process since the conduct of hazardous training is clearly contemplated at this time." Statement that any projected or future expansion of the airspace or landscape initiative must be evaluated as part of the present analysis. Inquiry as to why the BRAC process didn't take into account the long-term impact on receiving installations, such as Eglin AFB.	1	3
Request for additional information about the nongovernmental organizations that support this in order to submit concerns to them in addition to this effort.	-	-
Request that a copy of the final plan/drawings be available to the public.	1	1
Concerns that the proposed GRASI initiative has been in the works for several years and the public is just now hearing about it. One commenter participated in the Blackwater River State Forest Liaison Meetings and the Ten Year Review for the forest, and questioned why neither the EIS nor the proposal to use the land for military maneuvers was discussed during those meetings.	1	1
Inquiry as to the timeframe (years or months) in which these activities will commence. Request and justifications for an extension of the comment period.	-	1
Urge for the Air Force to be aligned with the Obama Administration's directive to "work together to ensure the public trust and establish a system of transparency, public participation, and collaboration."	-	-
Concern that an environmental study will never capture impacts to wildlife and ecosystems.	-	-
NOISE		
 Concern about noise impacts in general, day or night, to persons seeking solitude, on persons living nearby, on recreation, on birds and wildlife; specifically on the life cycle of river frogs, or to tourism, from air (particularly helicopters) and vehicular traffic through the forest, towns, neighborhoods, or the camping areas; or the use of bombs, gunfire, or "noise-generating expendables." References to specific past experiences with noise impacts: Concern that proposal would increase the already negative noise impacts at THSF and the surrounding area from the training zone used by military fighter planes for dog fighting and for low-flying aircraft. Commenter "has had many an outings disrupted by low-flying military aircraft some of which were so close to the ground that on one occasion when a fighter made a tight turn over our heads they were able to see him wave at us on the ground." Comment that there are already noise impacts from aircraft maneuvers over the Apalachicola River. Previous experience with military maneuvers on the Yellow River generated high noise levels with constant boat and helicopter traffic. Notation that Enjoying the calming quiet and sounds of nature are among the positive experiences that outdoor enthusiasts seek. This experience is already somewhat diminished by Whiting Field helicopter training flights. 	53	10
Notation that the Air Force has already increased public access to the interiors of larger blocks of land by creating roads into the Apalachicola National Forest due to a military aircraft crash. Recognition that his created a great disruption to the serenity of the forest as well as ecological damage.	1	-

Table 3-2. Summary of Comments by Resource Area, Cont'd

Consolidated Summary	THSF	BRSF
Request for the Air Force to preserve the last patches of untarnished Florida from noise.	1	-
Request for the Air Force to consider that helicopter and small arms fire are not sounds that citizens travel to state parks to hear. Statement that "the noise of gunfire, even if only blanks are used, can be upsetting for those of us who are using the Forest for hiking, canoeing, fishing. We are cognizant of designated hunting seasons, but random gunfire is unnerving."	1	2
Request for the Air Force to illustrate in the draft EIS noise profiles at lower decibel (dB) levels than 65 dB, such as 40 dB, so the public can understand how far away they may be disturbed by the noise from the training activities such as helicopter and small arms.	1	1
Request for the Air Force to document and provide a description of the noise and aircraft mitigations that will be used on low level military flight training or how noise from aircraft will be controlled. Request that the impact analysis of training operations include how the use of Blackwater Field during nighttime hours will not impact campers using the adjacent Krul Lake Campground.	2	2
PROPOSED ACTION		
Direction to "find a different site for the proposed actions and alternatives. Consider using already disturbed lands north of the proposed areas; bases being closed down from BRAC; the M.C. Davis greenway east of Eglin AFB that was acquired in Summer 2013; purchase land from private owners (St. Joe owns thousands of acres in N. Florida) elsewhere; areas near the Air Force base along Highway 98; dead spaces already destroyed by bombs; considering the use of abandoned airfields for training; to Apalachicola or Ocala National Forest (where the federal government can repair any damage done, fight any fires started, clean up oil and fuel spills, and monitor trash disposal); Avon Park bombing range; underused Naval Air Station (NAS) Whiting Field Golf Course; woods surrounding Hurlburt Field; east of THSF or over towards Tyndall; St. Joe lands; private paper company land; areas that the military has already impacted; purchased land around Eglin AFB; other military lands; already disused and disturbed land that can be acquired; work out the scheduling issues at Eglin AFB; in areas already available/owned/less pristine; purchasing property at a different location, such as WEWA; other county or city land, or using other military bases such as Tyndall AFB; FFS watch tower sites; NAS Pensacola, and the Gulf of Mexico." "The military already has enough training grounds and already comprises some significant land areas in the	55	29
Panhandle area." One commenter remarked that the military should look to some of the bases that are being closed down due to BRAC to meet its training needs.	_	_
Statement that "the proposed action and alternatives need to contain specifics regarding the length, timing, scale and duration of proposed activities; locations of these activities, the number of personnel, and the types and amount of equipment involved; and any proposed restricted access to provide the public a clear picture of the of the potential future of the state forests should you proceed with this initiative. Put a limit on the number of times such training exercises will occur on these state forests, unless there is a declaration of a national emergency."	7	5
Opposition to all proposed actions: select the No Action Alternative.	11	6
Opposition to training exercises at night or any scheduled during hunting season.	1	-
"The Apalachicola Bay Chamber of Commerce and its 400+ members oppose any increase in air traffic over the area and any training that would negatively impact the solitude and wildlife in the area."	1	-
Opposition to the use of state forests.	-	-
Opposition to the use of BRSF for military training exercises.	-	8
Opposition to giving up protected lands, State Parks or environmentally sensitive land. Concern that land owners will have their property destroyed and taken away, as was experienced in the 1940s for the Camp Johnston training.	2	1
Opposition to creating landing strips and a radar site in THSF, Franklin County, Florida.	1	-
Concern that military will want to increase use and type of use - that this is just a starting point, and in time, there would be hazardous activities proposed for the state forest.	1	-
Concern that Eglin AFB will take over BRSF.	-	1
Support for the proposal and military use of the forest. Specific anecdote: There have been training activities in this community with helicopters flying over my property in the past at night and we were not disturbed, neither were our animals, horse, goats, etc.	-	-
Request to "provide explanation on how the proposed actions adhere to the stated purposes of the State	2	2

Table 3-2. Summary of Comments by Resource Area, Cont'd

Consolidated Summary	THSF	BRSF
Forest System. This must be addressed in light of the legislation establishing the state forests. Military personnel participating in ground training activities cannot be considered normal forest users as stated at the scoping meeting."		
Concern that the number and type of proposed training activities far exceed what would be considered a reasonable proposal that could be incorporated into the forest use plan.		
Specific recommendation for alternate emitter sites such airports, Navy Outlying Fields, shopping center parking lots, church parking lots, schools, car lots, farms, and ranches for emitter sites. "Given the plan to set-up and move the emitter site daily, conflict with the regular use of these sites could easily be avoided. The fact that individual agreements would likely be necessary is not a legitimate reason to discount these options.	1	2
Proposed emitter sites within the state forests should be restricted to developed sites (i.e. the forest HQ or the former DJJ [Department of Juvenile Justice] sites), should not require utilities, and should not require the rerouting of the Florida Trail system."		
Request to make landing zones and airstrips open to the public through the Florida Park and Forest Service for air camping and fly ins. Request that the Blackwater Airfield is opened to for public use to allow the public better access to the campsite just to the southwest for air camping or other activities.	1	2
Request that no site improvements/construction should be undertaken. Specifically, no trees should be removed/felled, no sites compacted/hardened, and no foreign material (gravel, asphalt) brought in and used.	1	1
Request modification to the Draft EIS, specifically work in conjunction with designated representatives of all the various recreational groups of the two state forests, state agency archaeologists and historians, state agency biologists, and the state natural heritage program (the FNAI), in order to identify the geographic areas of the two state forests that will always be excluded from these training exercises because of their environmental sensitivity, historical value, or importance to recreational users of the forest.	1	1
Require Eglin AFB to notify all Florida panhandle media such as newspapers, radio stations, and through a regularly-maintained Eglin AFB website of the location of such activities two weeks prior to their anticipated use, unless there is a declaration of a national emergency. As part of this notification process, a mechanism must be developed for public feedback on the proposed usage and those public concerns must be publicly-addressed by Eglin AFB on their website prior to the training event and the possible consequences of such public input may results in modifications to the training event up to canceling the training at the original proposed site.		
Explicitly state the responsibility of the consequences of violations of the agreed-upon usage if it should occur (e.g., inadvertent destruction of a sensitive wetland). Restoration, fines, and up to removal of an area from any future training activities should be some of the possible consequences.		
Statement that "alternatives should be developed in the EIS process to exclude significant sensitive portions of both Blackwater and Tate's Hell State Forests from the impact of most of the proposed activities, including operations involving vehicles, aircraft, and training munitions, noise-generating expendables and pyrotechnic devices. The exclusion areas should be based upon detailed, ground-truthed mapping of habitats for rare and listed species, and high quality natural communities. In general, operations and constructed facilities need to be excluded from such areas, with adequate buffer zones."		
"Monitoring and control of these operations, even if limited as indicated in the suggested alternatives below, should involve credentialed third-party observers with the power to intervene with commanders in the field to curtail or alter operations on a real-time basis to protect fragile resources."		
"Alternatives should also incorporate the following limitations on military training exercises: (a) The operation of wheeled or tracked military vehicles in wetlands of any kind should be prohibited. Vehicle operations of all kinds should be limited to existing roads, and then be outside of designated exclusion areas. (b) The construction of airstrips or improvement of existing airstrips for fixed-wing aircraft use should not be permitted within either state forest. Aircraft operations should be limited to rotary aircraft. (c) Rotary aircraft operations, Temporary Combat Support Areas, Bivouacking, Assembly Areas, Hardened Camp Sites, and Emplacement of Obstacles should be limited to existing cleared areas and previously disturbed sites. (d) Installation of Emitter Sites should be limited to existing cleared, disturbed areas, where line-of-site for emitter operation is available without clearing, topping, or trimming old growth pine forest habitat		

Table 3-2. Summary of Comments by Resource Area, Cont'd

Consolidated Summary	THSF	BRSF
vital to Red-cockaded Woodpecker nesting and reproduction. (e) Amphibious operations should be limited to small boat maneuvers (not heavy landing craft). (f) Military training exercises should be limited in time and duration to avoid conflict with the traditional public access to these state forests and to avoid interference with the quality of experiences in these areas by members of the general public."		
PURPOSE AND NEED		
Request for Air Force to provide further justification for the proposals and explain why training cannot be conducted within the confines of the Eglin AFB range.	6	4
Statement that the Air Force is violating the 1.5 to 1-hour flight time criteria, available roads (minimal to no improvements), and available aircraft landing areas criteria as these do not exist at this time in THSF.	1	-
PHYSICAL RESOURCES (SOILS)		
Concern about erosion impacts from the vehicle stream and wetland crossings and from the ORVs, ATVs, and off-highway vehicles, particularly where operators may have no regard for the erosion of streambanks, where soils are sandy, where geology is fragile in BRSF, and particularly the exacerbation of areas already under constant care to avoid their destruction.	4	13
Statement that the amount of money spent on 319 grants to address sedimentation issues, culverts, inadequate bridges built into the riparian zone, abandoned sand and gravel pits, and bank stabilization efforts may be undone by these proposed activities. "The 319 grants received for the Blackwater are the tens of millions of dollars, and as stated earlier the Forest has worked hard and become very creative to stretch each dollar to accomplish their mission."	-	1
Concern about impacts to the roads as they wash out during heavy rains and are under constant repair. "Regular pick ups and four wheel drive vehicles often make ruts and I can only imagine that heavy traffic would make the roads more rutted than are now. This deterioration of the roadways would restrict public access since many of us do not drive trucks or four wheel drive vehicles."	-	1
Concern that building an airstrip would have substantive land disturbance, specifically the construction.	1	-
SAFETY		
Concern that the emitters would potentially disrupt both civilian, residential, emergency management, and private pilot communication devices and cause unknown health consequences for all species.	20	-
Concern about the safety of the public recreationalists or hunters during encounters with the military, particularly where the forest has historically been a safe and secluded place to recreate. Specific concerns about armed military/civilian conflicts during hunting season or otherwise; encounters with concertina wire; the safety of personal property after leaving a campsite; the safety of persons learning to drive in the forest; and blackout driving, wetland crossing, and helicopter training impacts, particularly on horseback riders.	2	6
Inquiry if military exercises will be conducted on or near existing hiking trails or campground areas in the Forest which would increase the risk of a chance encounter between a family or a lone hiker and an armed participant in military gear. Request that Air Force exercises be conducted where there will be little/no chance for such an encounter during the day or at night.		
Concern about military-caused fires particularly during periods of drought; specific direction provided to fight any fires started, clean up oil and fuel spills, and monitor trash disposal.	2	1
Concern about the possibility of training aircraft accidents, noting history of Air Force jet crash off St. George Island; particularly, low-flying aircraft collision or aircraft hazard impacts on the nearby power line running along this southern border of the Apalachicola National Forest (within close proximity to the proposed most northern airstrip).	3	-
Concern about airspace safety impacts from military and civilian aircraft conflicts. Citation of past personal experience of a general aviator being placed in harm's way when an Air Force miscommunication caused confusion about whether or not the airspace was active or not.	-	-
Concern about safety impacts from unexploded munitions; particularly where the surrounding property once was part of Harbison City, which was used by the Army for WWII training and is being searched for unexploded munitions, after 70 years.	2	-
SUBSISTENCE	00	
Concern about impacts on subsistence hunting and fishing, conducted to feed families.	23	-
SOCIOECONOMICS Concern about economic impacts to Franklin County and the Carrabelle area from reducing or restricting tourism due to military presence, injury to the pristine credibility of the area, and negative impacts from	33	5

Table 3-2. Summary of Comments by Resource Area, Cont'd

Consolidated Summary	THSF	BRSF
increased air traffic congestion and noise, particularly where the oyster industry in the Bay is suffering. Concern that the experience people come here for will be impacted.		
Request for the Air Force to include a study on the impacts on tourism. Quantify the long-term loss of tourism revenue and park use when the full proposed training use frequency of these areas is realized.		
"Request you define how the military will prevent impacts to the tourism industry." "The Carrabelle Area Chamber of Commerce's main marketing messages is our natural wonders and nature-based activities, if		
we were to change this it would have a negative impact on our tourists and definitely hurt the economy in Carrabelle and Franklin County. Tate's Hell State Forest is a huge attraction to visitors to Carrabelle and a big part of our economy. The tourism industry touches every small business in Franklin County including		
the following: Restaurants, retail, vacation rentals, hotels, RV/Camping Parks, B & B's, grocery stores, charter fishing captains, guides, outdoor and adventures shops, bait stores, marinas, hardware stores, and many more. We have a busy season from May to August, but the off-season from September to April is		
extremely slow and the small businesses have a difficult time staying open and making a profit."		
Statement that many of the residents of Franklin County depend on the bounty Tate's Hell State Forest provides through hunting and fishing to feed their families in this economically disadvantaged community.	17	-
Concern about the impacts to property values because of the expectation of serenity, and the undesirability	3	1
to live next to an extension of a military training base or an area experiencing noise disturbances. Concern about economic impacts to the river, bay, and its seafood industry. "We are trying to 'Save our	1	1
river, Save our bay' we are one of the last pristine estuaries left in the USA and it needs protecting – not only for now but for the future generations of our area and economics."		
Statement that the proposed actions and alternatives will make a positive impact by opening up areas in the forests for use, therefore contributing to the economy.	-	-
Commenter requests that proposal be designed to help create jobs, but was unclear if the military trainees would stay for an extended period or train and leave.	1	-
Statement that property owners of Franklin County are well aware that these lands are no longer in the county property tax base and understand the cost to them. Franklin County is an economically disadvantaged area, and the citizens view unimpeded use of the public lands as the biggest (for some, the only) benefit to that trade-off. Commenter considers the pristine ecosystem of the area as one of the most valuable things about living in this area.	14	3
THSF area is a "natural wonder" and "use of Tate's Hell for training is irresponsible." Concern about impacts to residents of Franklin County, Florida and impacts on their daily lives. "Citizens treasure their way of life in the less populated regions of Florida - the forests, wetlands, rivers, and wildlife." Request for the military to understand "the importance of Tate's Hell to millions of residents, visitors, and seafood lovers." Many commenters moved to Carrabelle because of its rural and natural environment.		
Concern that any additional airspace restriction would have an adverse effect on the air commerce in and out of Franklin County.	-	-
Concerns about impacts to the costly restored and protected the habitat for bears, wolves, etc.	1	-
Commenter questions who will profit from this destruction in THSF.	-	-
Concerns about noise or radar impacts to human health specifically for citizens who live nearby from emitters installed within Franklin County and for the emotional health of the people who leave their stress-filled lives behind to seek solace in the forest.	17	2
Concern that paved and unpaved road maintenance costs will increase due to higher volume of heavy vehicle traffic, where there is already a limited budget.	1	-
Concerns about impacts to quality of life.	1	-
Concern about impacts to the community and culture, including the Native American heritage, which has been present for the last 300 years, utilizing the land. Statement that this is the Native American community's land, their home, and they use this land for everything.	1	1
Request for Air Force to provide information on how people will be able to report damage to personal property from military activities.	1	-
WATER RESOURCES		
Concern about pollution or erosion impacts on the past, present, and future conservation efforts to restore the hydrologic system supporting Apalachicola Bay and the Gulf of Mexico. "This area is a nursery for numerous creatures in the Gulf. Even with past efforts, Apalachicola Bay, the oyster industry, and the	59	11

Table 3-2. Summary of Comments by Resource Area, Cont'd

Consolidated Summary	THSF	BRSF
entire estuary are currently in a perilous condition." Notation that "the original purpose for converting the Tate's Hell tract from county property to state-owned forest was conservation, specifically for hydrological protection and restoration of Apalachicola Bay."	11131	BNSI
Specific concerns about impacts to the 29 surface water drainage basins in the forest, such as the Blackwater River, Juniper Creek, Coldwater Creek and Sweetwater Creek.		
"Accidents are inadvertent and will happen; an oil or fuel spill, or fire, or damage to stream banks will endanger the Apalachicola River and Bay."		
Notation that "Tate's Hell is a very fragile ecosystem that acts as a buffer for storm surge from the coast."	-	-
 Concerns about the following proposed actions: "Cross-country Vehicle Movement – Water Quality, sedimentation, woody material will all potentially be impacted. Water Quality via oil, brakes, etc. entering the system. Sedimentation as these big heavy equipment moves through the system. As log jams and snags are encountered, what will these maneuvers entail? Removal, bad for the system. Drive over, bad for the habitat (the holes that they make), what will be done? Vehicle Stream and Wetland Crossings – impact hydrologic system. Heavy vehicles will create drainage ditches which alter the hydrology of the system and will potentially re-route water potentially causing future sedimentation in the system. We recognize that these disturbances coupled with our 65" of annual rainfall unwittingly create these issues. Emplacement of Obstacles – will any of these obstacles be placed in a stream/creek/wetland system? Will they be removed? Concern about amphibious operation impacts to the stream that runs through the Forest's pitcher plant bogs." Inquiry about "how the Air Force can mitigate or restore the hydrologic impact that the use of these vehicles 	3	8
will cause in these low lying sensitive areas."	_	
Concern about impacts to water quality and the resulting impacts on dwarf cypress and fish that is eaten by those that fish, specifically impacts from exhaust, fuel, and oil that is dropped from low flying aircraft (helicopters).	2	1
Concern about impacts on wetlands. "Why are vehicles being used to cross any wetlands? I thought we were told that vehicles would have to stay on roads. Request that you look at the hydrological function of the wetlands and the forest, especially focusing on the impacts from road improvements and the resulting impacts on floodplains." Notation that the logging roads that are in the forest impact hydrological functions. Request for Air Force to "elaborate how the US EPA regulations for 'no loss of wetlands' will be met." Statement that on-going monitoring had identified improvements in these areas, along the northern reaches of the forest. We are very concerned that your activities will impact these small steps in a negative manner."	1	3
Concern about impacts from the use of man-made infrastructure (the building of air strips) to accommodate drainage.	-	-
Statement that "[t]he Blackwater River system and watershed have been in peril for years (due to the logging industry in the 1800-1900's, which denuded the forest and caused heavy sedimentation in the riverine system, cattle which were allowed to roam and defecate in the creeks through the 1980s, ATVs and other trucks that mud bog and 'play' in the system still to this day). This system, once dominated by deep water, pools, riffles, and upwards of 45-55% woody material (trees) in the system which served to stabilize banks and provide a habitat for an important fishery; today the system is choked by sand (shallow water is warmer and thus holds less oxygen, which is a hazard for aquatic species) in active recreational areas (canoeing trails), whereas the highly important and sensitive gravel bars which are found throughout the upper reaches in areas not frequented by the public because access is difficult and in cases dangerous. The Forest Service governed by the State of FL and the Trustees, under political pressure and political favors have already reversed a previous ban to now allow deadhead logging in a riverine system recognized as an 'Outstanding FL Water' (which should protect it from any disturbance or impairment, water quality or habitat wise) and which also holds a second title 'Special Waters of the State'. The PUBLIC is disturbed by these rule changes, the lack of enforcement, and manner in which these continued assaults are impacting and jeopardizing the system. What makes this scenario worse is that scientists, ecologists, and biologists are not involved in the decision making process, instead businessmen and elected officials dabbling in politics are making decisions. The Blackwater Watershed is divided into small segments,		1

Table 3-2. Summary of Comments by Resource Area, Cont'd

Consolidated Summary	THSF	BRSF
named HUC units, for the purposes of dividing the system into smaller components is to be able to better identify and delineate issues, like contaminants and water quality impairments. Every HUC Unit within the Blackwater River System is on the 303(d) list for water quality impairments; please let me remind you that Outstanding FL Waters are to be more protected than waters without special attributes. The Indian River, along Florida's East Coast was also identified as an Outstanding FL Water and has suffered from years of neglect, relaxing water quality standards, and eutrophication until now we are seeing and noting record level deaths of manatees and dolphins, as well as dwindling crab and fish populations."		
Notation that "this proposal is coming at a time when the State of Florida is asking the Supreme Court of the United States to protect the Apalachicola Bay by limiting the fresh water use some 200-300 miles upstream." Concern that "landing men and helicopters in and around this same Bay will have negative impacts as this is less than 20 miles upstream."	2	-

4. CONCLUSION

The Draft GLI EIS scoping process received extensive public engagement. Agencies, government representatives, NGOs, and citizens presented 167 comment submittals to the Air Force.

The actions and topics of greatest concern included impacts upon the unique state forest ecosystems; concerns about the reversal of decades of conservation work; concerns about nighttime noise and training activities impacting ecological functions; restrictions on recreation or public ground or air access to state forests; the incompatibility of the Air Force use and the original purpose of the forests; impacts to recreational pursuits, and impacts on subsistence hunting and fishing, conducted to feed local families. Several commenters requested clear and advance notice of military use. Concerns were also expressed about potential increases in airspace conflicts or proposed expansions of restricted areas, as well as concerns about future escalation of military activities. Dozens of Franklin County entities expressed concerns about socioeconomic impacts on tourism from reducing or restricting tourism due to military presence, injury to the pristine credibility of the area, and negative impacts from increased air traffic congestion and noise.

Several commenters requested more details about the proposed action, including specifics regarding the locations, length, timing, scale and duration of proposed activities; the number of personnel; the types and amount of equipment involved; and any proposed restricted access. Commenters inquired as to why they were not informed by the military or the FFS regarding the potential of military use of state forests earlier. Numerous commenters requested that the Air Force abandon looking to the state forests as a possible training location and to find different sites for training such as other bases or private lands. Several commenters had concerns about erosion impacts from the vehicle stream and wetland crossings and from the ORVs.

Other major concerns related to the possibility of emitters potentially disrupting civilian, residential, emergency management, and private pilot communication devices or causing unknown health consequences for all species. Concerns were also expressed about the military's ability to adequately clean up and dispose of waste based upon past history and concerns about noise impacts upon the serenity found in the state forests.

ADDENDUM A SCOPING NOTIFICATION MATERIALS

NOTICE OF INTENT
IICEP LETTER – FINAL
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NOTICE OF INTENT



48862

Federal Register/Vol. 78, No. 155/Monday, August 12, 2013/Notices

Committee could revisit the project ranking to adapt to changing management needs.

This notice announces that NMFS has determined that the PRIA MCP satisfies the requirements of the Magnuson-Stevens Act and approves the MCP for the 3-year period from August 1, 2013, through July 31, 2016.

Dated: August 7, 2013.

Emily H. Menashes.

Deputy Director, Office of Sustainable Fisheries, National Marine Fisheries Service. [FR Doc. 2013–19499 Filed 8–9–13; 8:45 am]

BILLING CODE 3510-22-P

DEPARTMENT OF DEFENSE

Department of Air Force

Intent To Prepare an Environmental Impact Statement for the Gulf Regional Airspace Strategic Initiative (GRASI) Landscape Initiative

AGENCY: Department of the Air Force, DOD.

ACTION: Notice of Intent.

SUMMARY: The Air Force is issuing this notice to advise the public of its intent to prepare an Environmental Impact Statement (EIS). The Gulf Regional Airspace Strategic Initiative (GRASI) Landscape Initiative (GLI) is a U.S Air Force-led partnership with the State of Florida and other state and federal agencies to expand the capacity of the region to safely host military test and training operations.

Under the GLI EIS, the Air Force's Proposed Action is to utilize Blackwater River State Forest (BRSF) and Tate's Hell State Forest (THSF) for establishing helicopter landing and drop zones, airstrips, and a number of different land and air training activities which

currently occur within the interstitial (areas between designated test/training sites) areas of the Eglin Air Force Base (AFB) Range. The Air Force is also proposing to establish up to 12 radar, telemetry, and training emitter sites throughout northwest Florida. The emitter sites would support development of an integrated air

defense system, which would provide unique, viable, and robust air training, Scoping: In order to effectively define

the full range of issues to be evaluated in the EIS, the Air Force will determine the scope (i.e. what will be covered and in what detail) by soliciting comments from interested state and federal agencies and interested members of the public through the Federal Register and various media in the local communities near the Proposed Action. The Air Force

will also hold a series of scoping meetings to further solicit input regarding the scope of the proposed action and any reasonable alternatives. DATES: Scoping meetings will be held in

DATES: Scoping meetings will be held in the local communities near the state forests. The scheduled dates, times, locations and addresses for the scoping meetings will be published in local media a minimum of 15 days prior to the scoping meetings. The Air Force intends to hold scoping meetings in the following communities on the following dates:

August 27, 2013: Milton Community Center, Gracie Room, 5629 Byrom St., Milton, Florida

August 28, 2013: Blountstown Civic Center, 17773 Ne Pear St., Blountstown, Florida August 29, 2013: Apalachicola

Community Center, 1 Bay Ave, Apalachicola, Florida

Scoping comments can be submitted to the mailing address below or via the GRASI GLI EIS Web site (grasieis.leidoseemg.com) by the date indicated. Comments will be accepted at any time during the environmental impact analysis process. However, to ensure the Air Force has sufficient time to consider public input in the preparation of the Draft EIS, comments should be submitted to the Web site or the address listed below by September 9, 2013.

FOR FURTHER INFORMATION CONTACT: Mr. Mike Spaits, Eglin AFB Public Affairs Office, 96 TW/PA, 101 West D Avenue, Suite 110, Eglin AFB, FL 32542–5499, (850) 882–2836 spaitsm@eglin.af.mil September 9, 2013.

Henry Williams Jr,

DAF, Acting Air Force Federal Register Liaison Officer.

[FR Doc. 2013-19468 Filed 8-9-13; 8:45 am]

DEPARTMENT OF EDUCATION [Docket No.: ED-2013-ICCD-0102]

Agency Information Collection
Activities; Submission to the Office of
Management and Budget for Review
and Approval; Comment Request;
NAEP Wave 2 (TEL and Assessment
Feedback) Under the National
Assessment of Education Progress
(NAEP) 2014–2016 System Clearance

AGENCY: Institute of Education Sciences/ National Center for Education Statistics (IES), Department of Education (ED). ACTION: Notice.

SUMMARY: In accordance with the Paperwork Reduction Act of 1995 (44 U.S.C. chapter 3501 et seq.), ED is proposing a new Generic information collection to an existing information collection.

DATES: Interested persons are invited to submit comments on or before September 11, 2013.

ADDRESSES: Comments submitted in response to this notice should be submitted electronically through the Federal eRulemaking Portal at http:// www.regulations.gov by selecting Docket ID number ED-2013-ICCD-0102 or via postal mail, commercial delivery, or hand delivery. Please note that comments submitted by fax or email and those submitted after the comment period will not be accepted. Written requests for information or comments submitted by postal mail or delivery should be addressed to the Director of the Information Collection Clearance Division, U.S. Department of Education, 400 Maryland Avenue SW., LBJ, Room 2E105, Washington, DC 20202-4537.

FOR FURTHER INFORMATION CONTACT:

Electronically mail ICDocketMgr@ed.gov. Please do not send comments here.

SUPPLEMENTARY INFORMATION: The Department of Education (ED), in accordance with the Paperwork Reduction Act of 1995 (PRA) (44 U.S.C. 3506(c)(2)(A)), provides the general public and Federal agencies with an opportunity to comment on proposed, revised, and continuing collections of information. This helps the Department assess the impact of its information collection requirements and minimize the public's reporting burden. It also helps the public understand the Department's information collection requirements and provide the requested data in the desired format. ED is soliciting comments on the proposed information collection request (ICR) that is described below. The Department of Education is especially interested in public comment addressing the following issues: (1) Is this collection necessary to the proper functions of the Department; (2) will this information be processed and used in a timely manner; (3) is the estimate of burden accurate: (4) how might the Department enhance the quality, utility, and clarity of the information to be collected; and (5) how might the Department minimize the burden of this collection on the respondents, including through the use of information technology. Please note that written comments received in response to this notice will be considered public records.

Title of Collection: NAEP Wave 2 (TEL and Assessment Feedback) under the National Assessment of Education

IICEP LETTER – FINAL



DEPARTMENT OF THE AIR FORCE HEADQUARTERS 96TH TEST WING (AFMC) EGLIN AIR FORCE BASE FLORIDA

12 August 2013

MEMORANDUM FOR <ADDRESSEE>

FROM: 96 TW/CC

101 West D Avenue, Suite 132 Eglin AFB FL 32542-5495

SUBJECT: Environmental Impact Statement (EIS) for the Gulf Regional Airspace Strategic Initiative (GRASI) Landscape Initiative

- 1. Under the National Environmental Policy Act, the United States Air Force is preparing an EIS. The EIS will assess the potential environmental consequences associated with the GRASI Landscape Initiative (GLI). The GLI is a U.S Air Force-led partnership with the State of Florida and other state and federal agencies to expand the capacity of the region to safely host military test and training operations.
- 2. Under the GLI EIS, the Air Force's Proposed Action is to utilize Blackwater River State Forest (BRSF) and Tate's Hell State Forest (THSF) for establishing helicopter landing and drop zones, airstrips, and a number of different land and air training activities which currently occur on Eglin Air Force Base (AFB). The Air Force is also proposing to establish up to 12 radar, telemetry and training emitter sites throughout northwest Florida. The emitter sites would support development of a simulated integrated air defense system, which would provide unique, viable, and robust air training. The attached map (Atch 1) shows the locations of the proposed emitter sites and of BRSF and THSF.
- 3. This EIS addresses the actions ready for decision, namely, those described previously as the Proposed Action. A no-action alternative will also be examined that does not implement the GLI. No alternative will be selected until after EIS is complete.
- 4. The purpose of the Air Force's Proposed Action is to afford military operational flexibility by providing optional training space for nonhazardous training should hazardous activity preclude use of the Eglin AFB Range. This would be accomplished through two types of partnerships:

 1) Air Force partnership with the State of Florida to utilize BRSF and THSF for nonhazardous testing and training activities as needed; and 2) Air Force partnership with the Florida Forest Service and Florida Fish and Wildlife Conservation Commission for use of small, noncontiguous land areas throughout the region for placement of temporary and mobile training emitters. Training activities proposed for the BRSF and THSF would be compatible with the state forests and include nonhazardous training activities that are already conducted on Eglin Air Force Base Range. No live munitions would be used and no substantive land disturbance or construction

activities would occur. The proposal does not increase the number of military training operations within the GRASI Region and shifts the training from Eglin Range to the state forests on an as-needed basis. Initially, training would occur perhaps only a few times annually and as the GLI program becomes more established training activities would increase over time.

- 5. The Proposed Action is needed because restricted areas over Eglin AFB create scheduling conflicts for nonhazardous training. Additional land areas in the GRASI region are necessary to enhance military training capabilities and deconflict scheduling issues. Establishing new nonhazardous training areas and placing training emitters in remote locations would also improve scheduling outcomes and reduce the demand on restricted areas.
- 6. The Air Force will be holding public open house scoping meetings in areas potentially impacted by the proposals. The purpose of the meetings and the scoping period is to further solicit input regarding the scope of issues to be addressed and identify environmental issues to be analyzed in depth. The attached flyer (Atch 2) advertises the scoping meetings and we would appreciate it if you would post this flyer in a public location.
- 7. During the scoping meetings, the Air Force will provide additional information about the GLI. Public and agency comments presented at the meetings, as well as written comments received by the Air Force during the scoping period and throughout the environmental process, will be considered in the preparation of the EIS.
- 8. The Air Force's notice of intent (NOI) to prepare an EIS and hold scoping meetings was published in the Federal Register the week of August 12, 2013, and will also be published in local newspapers approximately two weeks prior to the scoping meetings.

SCOPING MEETING DATES AND LOCATIONS

Date	Location	Meeting Time
	Milton Community Center, Gracie Room	
August 27, 2013	5629 Byrom St.	6:00 PM
	Milton, Florida	
	Blountstown Civic Center	
August 28, 2013	17773 Ne Pear St.	6:00 PM
	Blountstown, Florida	
	Apalachicola Community Center	
August 29, 2013	1 Bay Ave	6:00 PM
	Apalachicola, Florida	

9. In an effort to analyze the potential consequences of the GRASI Landscape Initiative, the Air Force or its contractor, SAIC, may contact you in their data collection efforts. Please provide your comments or information no later than 30 days from receipt of this letter, to be incorporated in the EIS. Scoping comments can be submitted to the address below or via the GLI EIS website (grasieis.leidoseemg.com) by the date indicated.

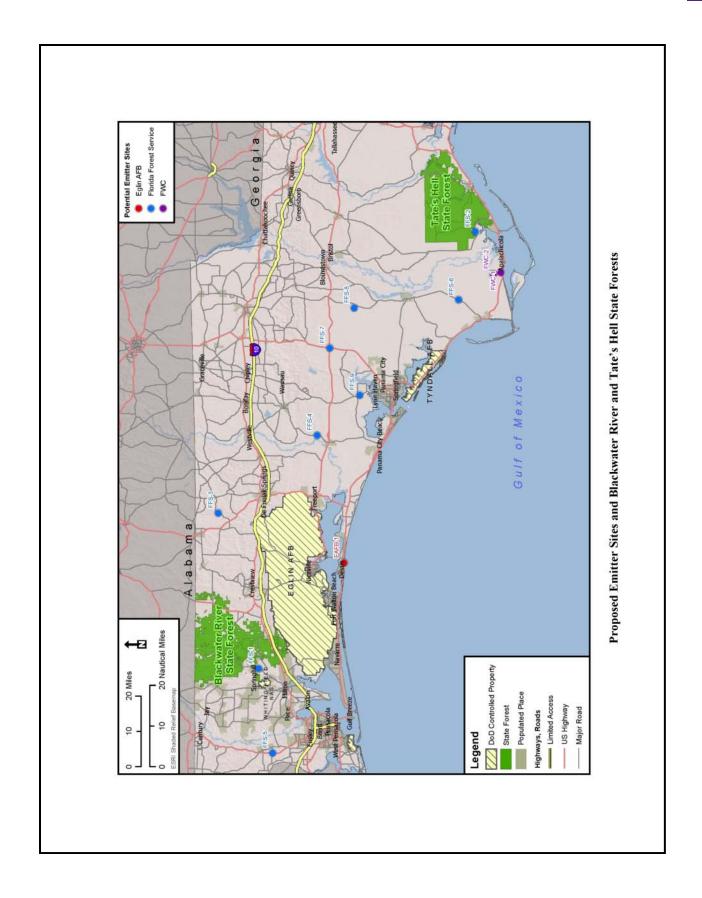
- 3 –

10. If you have specific questions about the proposal, we would like to hear from you. Please feel free to contact Mr. Mike Spaits, Eglin AFB Public Affairs Office, 96 TW/PA, 101 West D Avenue, Room 238, Eglin AFB, FL 32542-5499; (850) 882-2836; spaitsm@eglin.af.mil. Thank you for your assistance in this matter.

DAVID A. HARRIS Brigadier General, USAF Commander

Attachments:

- 1. Map of Proposed Emitter Sites and Blackwater River and Tate's Hell State Forests
- 2. Flyer of Scoping Meeting Locations





The U.S. Air Force Invites You to Attend Public Scoping Meetings for the Proposed Gulf Regional Airspace Strategic Initiative (GRASI) Landscape Initiative

The U.S. Air Force is proposing to use Blackwater River and Tate's Hell State Forests (BRSF and THSF) for nonhazardous military training activities and to establish and use of up to 12 emitter sites in northwest Florida through the GRASI Landscape Initiative. The proposals would build additional regional capacity for nonhazardous training operations that can be conducted outside restricted areas. This would be accomplished through two partnerships:

- Partnership with the State of Florida to utilize BRSF and THSF for nonhazardous activities as needed.
 Training activities proposed for the BRSF and THSF would be compatible with the state forests and
 include nonhazardous training activities that are already conducted on the Eglin AFB Range. No
 live munitions would be used and no substantive land disturbance or construction activities would
 occur. The proposal does not increase the number of military training operations within the GRASI
 region and shifts the training from the Eglin AFB Range to the state forests on an as-needed basis.
 Initially, training would occur a few times annually, and training activities would increase as the
 GRASI Landscape Initiative program becomes more established.
- Partnership with Florida Forest Service and Florida Fish and Wildlife Conservation Commission for use of associated lands for placement of temporary and mobile training radar emitters.

By utilizing the GRASI landscape, the geographic scope of military training would more closely resemble that of actual combat scenarios. Ground units would be able to practice over a larger and more diverse area. Establishing new nonhazardous training areas and placing training emitters in remote locations would also improve training outcomes through better scheduling and reduce the competing demands on restricted areas. Pursuant to the National Environmental Policy Act, the Air Force will prepare an Environmental Impact Statement (EIS), which will assess the potential environmental consequences of the GRASI Landscape Initiative.

Public Scoping Meetings

Public scoping meetings are being held to inform the public about the proposed action and alternatives under consideration and to "scope" important issues to evaluate in the EIS. The meetings will begin at 6:00 p.m. with an open house, with an Air Force presentation starting at 6:30 p.m., followed by an opportunity for public comment at 7:00 p.m. Your input is valuable and assists the Air Force in making more informed decisions.

DATES/TIMES	SCOPING MEETING LOCATIONS
August 27, 2013	Milton Community Center, Gracie Room, 5629 Byrom St., Milton, Florida
August 28, 2013	Blountstown Civic Center, 17773 Ne Pear St., Blountstown, Florida
August 29, 2013	Apalachicola Community Center, 1 Bay Ave, Apalachicola, Florida

For more information or to submit written comments visit the GRASI Landscape Initiative EIS website (grasieis.leidoseemg.com) or contact: Mr. Mike Spaits, Eglin AFB Public Affairs Office, 96 TW/PA,

101 West D Avenue, Room 238, Eglin AFB, FL 32542-5499; (850) 882-2836; spaitsm@eglin.af.mil

The Air Force will accept comments at any time during the environmental impact analysis process.

However, to ensure the Air Force has sufficient time to consider public input in the preparation of the draft EIS, please submit comments by September 12, 2013.

DISTRIBUTION LIST

Entity2	Name	Name2	Company	Address1	Address2	City	State	ZIP
Federal								
FAA	Ray Towles	FAA Headquarters, Deputy Assistant Administrator for Regions and Center Operations	U.S. Department of Transportation	Federal Aviation Administration	800 Independence Avenue, SW	Washington	DC	20591
Regional	NOAA Fisheries Service	Southeast Regional Office				Saint Petersburg	FL	33701
Local	Northwest Florida Water Management District	225 Commonwealth Blvd., MS LS225		Tallahassee	FL	32399		
Regional	Maj. Phil May	Regional Administrator	Federal Emergency Management Agency Region IV	3003 Chamblee- Tucker Road		Atlanta	GA	30341
Regional	Ms. Cindy Dohner	Regional Director	U.S. Fish and Wildlife Service SE Region	1875 Century Blvd, Suite 400		Atlanta	GA	30345
Regional	Ms. Lisa Jackson	Regional Administrator	U.S. EPA Region IV	Sam Nunn Atlanta Federal Center	61 Forsyth St, SW	Atlanta	GA	30303
Regional	Dr. Willie R. Taylor	Director, Office of Environmental Policy and Compliance, US DOI	Main Interior Building (MS 2342)	1849 C Street, NW		Washington	DC	20240
Regional	Mr. Peter Bahm		OSD Office of Economic Development	400 Army Navy Drive, Suite 200		Arlington	VA	22202
Federal	Reid Nelson, Director		Office of Federal Agency Programs	Old Post Office Building	1100 Pennsylvania Avenue, NW, Suite 803	Washington	DC	20004
FAA	Douglas R. Murphy	FAA Southern Region Regional Administrator		P.O. Box 20636		Atlanta	GA	30320
FAA	David Foley	FAA Headquarters, Director, Aviation Logistics Organization	U.S. Department of Transportation	Federal Aviation Administration	800 Independence Avenue, SW	Washington	DC	20591

Entity2	Name	Name2	Company	Address1	Address2	City	State	ZIP
Regional	Ben West	U.S. Environmental Protection Agency		61 Forsyth Street, SW		Atlanta	GA	30303
State								
Florida	Representative Jeff Miller	Representative	Florida Representative District 1	348 S.W. Miracle Strip Parkway		Fort Walton Beach	FL	32548
Florida	Representative Matt Gaetz	District 4	Florida State House of Representatives	1188 Eglin Parkway		Shalimar	FL	32579
Florida	Senator Bill Nelson	Florida Senator		716 Hart Senate Office Building		Washington	DC	20510
Florida	Senator Marco Rubio	Florida Senator		317 Heart Seanote Office Building		Washington	DC	20510
Florida	Representative Brad Drake	District 5		400 House Office Building	402 S. Monroe Street	Tallahassee	FL	32399- 1300
Okaloosa	Mr. Bob Black	Military Representative	Representative Jeff Miller	348 S.W. Miracle Strip Parkway	Suite 24	Fort Walton Beach	FL	32548
Regional	Ms. Lauren Milligan	Environmental Manager - Clearinghouse Coordination	Florida Department of Environmental Protection	3900 Commonwealth Boulevard, Mail Station 47		Tallahassee	FL	32399- 3000
Forest	Donald Forgione	Director	Florida Park Service	3900 Commonwealth Boulevard		Tallahassee	FL	32399
Forest	James R. Karels	Director	Florida Forest Service	3125 Conner Boulevard		Tallahassee	FL	32399- 1650
Forest	Tom LeDew	Manager, Blackwater Forestry Center	Florida Forest Service	11650 Munson Highway		Milton	FL	32570
Forest	John Sabo	Manager, Chipola Forestry Center	Florida Forest Service	715 West 15 Street		Panama City	FL	32401
Forest	Ken Weber	Manager, Tallahassee Forestry Center	Florida Forest Service	865 Geddie Road		Tallahassee	FL	32304
Forest	Florida Forest Service	Blackwater River State Forest		11650 Munson Hwy		Milton	FL	32570
Forest	Florida Forest Service	Tate's Hell State Forest	Carrabelle Field Office	290 Airport Road		Carrabelle	FL	32322

Entity2	Name	Name2	Company	Address1	Address2	City	State	ZIP
Regional	Lt. Col. Louie Roberson	Regional Director, Northwest Region	Florida Fish and Wildlife Conservation Commission	3911 Hwy. 2321		Panama City	FL	32409
Florida	Robert F. Bendus, Director		Division of Historical Resources	R.A. Gray Building	500 South Bronough Street	Tallahassee	FL	32399- 0250
Alabama	Governor Robert Bentley	State of Alabama	State Capitol of Alabama	600 Dexter Avenue		Montgomery	AL	36130
Florida	Governor Rick Scott	State of Florida	The Capitol	400 S. Monroe St.	Monroe St.		FL	32399
Forest	Florida Park Service	Northwest Region- District 1	District 1 Administration	1 Administration 4620 State Park Lane		Panama City	FL	32408
County								
Okaloosa	Commissioner Kelly Windes	Okaloosa County Commissioner	Okaloosa County	1804 Lewis Turner Blvd.	urner Suite 100 Fort W		FL	32547
Okaloosa	Mr. James Curry	Okaloosa County Administrator	Okaloosa County	1804 Lewis Turner Boulevard	Ste. 400	Fort Walton Beach	FL	32547
Santa Rosa	Commissioner Jim Melvin	Santa Rosa County Commissioner	Santa Rosa County	6495 Caroline St.	Suite M	Milton	FL	32570
Santa Rosa	Santa Rosa County Planning and Zoning			6051 Old Bagdad		Milton	FL	32572
Walton	Kenneth Pridgen	Walton County Commissioner, Chair	Walton County	17400 State Highway 83 North		DeFuniak Springs	FL	32433
Calhoun	Kristy Terry	Executive Director	Calhoun County Chamber of Commerce	20816 Central Avenue East		Blountstown	FL	32424
Washington	Steve Joyner	Washington County Manager	Washington County	1331 South Blvd.		Chipley	FL	32428
Washington	Washington County Chamber of Commerce		Washington County	672 5th Street	P.O. Box 457	Chipley	FL	32428
Gulf	Don Butler	County Administrator	Gulf County	1000 Cecil G. Costin Sr. Blvd.	Room 302	Port St. Joe	FL	32456
Gulf	Gulf County Chamber of Commerce		Gulf County	406 Marina Drive		Port St. Joe	FL	32456

Entity2	Name	Name2	Company	Address1	Address2	City	State	ZIP
Franklin	Pinki Jackel	Franklin County Commissioner, District 1	Franklin County		33 Market Street, Suite 305	Apalachicola	FL	32320
Liberty	Johnny B. Eubanks	Executive Director	Liberty County Chamber of Commerce		P.O. Box 523	Bristol	FL	32321
Covington - Alabama	Brenda T. Petty	Covington County Administrator	Office of Covington County Commission	P.O. Box 188	260 Hillcrest Drive	Andalusia	AL	36420
Covington - Alabama	Bill Goodwin	Covington County Commission, Chairman	Office of Covington County Commission	P.O. Box 188	260 Hillcrest Drive	Andalusia	AL	36420
Bay	George B. Gainer, Chairman	Bay County Commission		P.O. Box 1818		Panama City	FL	32401
Bay	Ed Smith	Bay County Manager		P.O. Box 1818		Panama City	FL	32401
Calhoun	Lee Lee Brown	Calhoun County Commissioner	Calhoun County	20859 Central Ave. East		Blountstown	FL	32424
Escambia	Gene M. Valentino, Chairman	Escambia Florida County Commissioner	Escambia County	221 Palafox Place		Pensacola	FL	32502
Escambia	Mr. Larry Newsom	Escambia Florida County Administrator	Escambia County	221 Palafox Place		Pensacola	FL	32502
Escambia - Alabama	Mr. Tony Sanks	Escambia County Alabama Administrator		P.O. Box 848		Brewton	AL	36427
Escambia - Alabama	David M. Stokes	Escambia County Commissioner		P. O. Box 848		Brewton	AL	36427
Gulf	Tan Smiley	Gulf County Commissioner, District 4, Chair	Gulf County	Board of County Commissioners	1000 Cecil G. Costin, Sr. Blvd.	Port St. Joe	FL	32456
Washington	Alan T. Bush	County Commissioner, District 1	Washington County	1331 South Blvd.		Chipley	FL	32428
Local	Northwest Florida Water Management District	Crestview Field Office		180 E. Redstone Avenue		Crestview	FL	32539
Local	Northwest Florida Water Management District	Econfina Field Office		6418 E. Highway 20		Youngstown	FL	32466

Entity2	Name	Name2	Company	Address1	Address2	City	State	ZIP
Local	Northwest Florida Water Management District	Marianna Field Office		4765 Pelt Street		Marianna	FL	32446
Local	Northwest Florida Water Management District	Milton Field Office		5453 Davisson Road	153 Davisson Road		FL	32583
Regional	Northwest Florida Water Management District	Headquarters		81 Water Management Drive		Havana	FL	32333- 4712
City								
Okaloosa	Eric Davis	Administrative Services Planning Official	City of Crestview	1209 S. Wilson		Crestview	FL	32536
Okaloosa	Honorable David Cadle	Mayor of Crestview	City of Crestview	P.O. Drawer 1209		Crestview	FL	32539
Okaloosa	Mr. Benjamin J. "Nuche" lannucci, III	Crestview City Councilmember	City of Crestview	151 Cedar Avenue East		Crestview	FL	32536
Okaloosa	Ms. Karen Hardell	Crestview Chamber of Commerce President	Crestview Chamber of Commerce	1447 Commerce Dr.		Fort Walton Beach	FL	32548
Walton	Honorable C. Harold Carpenter	Mayor of DeFuniak Springs	City of DeFuniak Springs	PO Box 685	71 US Hwy 90 West	DeFuniak Springs	FL	32433
Walton	Honorable J.M. "Mickey" Marse	Mayor of Freeport	City of Freeport	P.O. Box 339		Freeport	FL	32439
Calhoun	Tony Shoemake	Mayor of Blountstown	City of Blountstown	City Hall, City of Blountstown	20591 Central Avenue West	Blountstown	FL	32424
Calhoun	Wes Johnston	Mayor of Altha	Town of Altha	Altha Town Hall	25621 NW First St.	Altha	FL	32421
Washington	Dan Miner	City of Chipley Administrator	City of Chipley	City Hall	1442 Jackson Ave	Chipley	FL	32428
Washington	Michelle Cook	Mayor of Vernon	City of Vernon	Vernon City Hall	2808 Yellow Jacket Drive	Vernon	FL	32462
Gulf	Melvin C. Magidson Jr.	Mayor/Commissioner of Port St. Joe	City of Port St. Joe	P.O. Box 278		Port St. Joe	FL	32457
Gulf	Phillip Gaskin	Mayor of Wewahitchka	City of Wewahitchka	PO Box 966	318 South 7th Street	Wewahitchka	FL	32465

Entity2	Name	Name2	Company	Address1	Address2	City	State	ZIP
Franklin	Betty Taylor Webb	Apalachicola City Administrator	City of Apalachicola		1 Bay Avenue	Apalachicola	FL	32320
Franklin	Wilburn "Curley" Messer	Mayor of Carrabelle	City of Carrabelle		1001 Gray Ave.	Carrabelle	FL	32322
Franklin	Carrabelle Area Chamber of Commerce		City of Carrabelle 105 St. James Ave. P.O. Drawer DD		Carrabelle	FL	32322	
Liberty	Steven A. Cutshaw	Mayor of Bristol	City of Bristol		12444 NW Virginia G Weaver St.	Bristol	FL	32321
Santa Rosa	Brian Watkins	Milton City Manager	City of Milton	P.O. Box 909		Milton	FL	32572
Santa Rosa	Guy Thompson	Mayor of Milton	Mayor and City Council	P.O. Box 909		Milton	FL	32572
Santa Rosa	Kurvin Qualls	Mayor of Jay		3695 Hwy 4	P.O. Box 66	Jay	FL	32565
Santa Rosa	Linda Carden	Town of Jay Clerk/Manager		3695 Hwy 4	P.O. Box 66	Jay	FL	32565
Covington - Alabama	Honorable Earl Johnson	Mayor of Andalusia	Andalusia City Hall	505 East Three Notch Street		Andalusia	AL	36420
Вау	Honorable Greg Brudnicki	Mayor of Panama City	City Hall	9 Harrison Avenue		Panama City	FL	32402
Вау	John Kady	Panama City Commission		9 Harrison Avenue		Panama City	FL	32402
Calhoun	Clifford Jackson	Council Member, Ward No. 1	City of Blountstown	City Hall, City of Blountstown	20591 Central Avenue West	Blountstown	FL	32424
Calhoun	Lee Alday	Council Member	Town of Altha	Altha Town Hall	25621 NW First St.	Altha	FL	32421
Escambia	Honorable Ashton J. Hayward	Mayor of Pensacola	Pensacola City Hall	222 West Main Street	7th Floor	Pensacola	FL	32502
Escambia - Alabama	Yank Lovelace	Mayor of Brewton	City of Brewton	1010A Douglas Avenue		Brewton	AL	36426
Escambia - Alabama	Pat Poole	Brewton Councilman District 1	City of Brewton	1010A Douglas Avenue		Brewton	AL	36426
Escambia - Alabama	Terry Clark	Mayor of East Brewton	City of East Brewton	P.O. Box 1266		Atmore	AL	36504

Entity2	Name	Name2	Company	Address1	Address2	City	State	ZIP
Escambia - Alabama	Atmore Area Chamber of Commerce			501 South Pensacola Avenue		Atmore	AL	36502
Escambia - Alabama	Kirk Garrett	Greater Brewton Area Chamber of Commerce, President		1010-B Douglas Avenue		Brewton	AL	36426
Franklin	Van Johnson	Mayor of Apalachicola	City of Apalachicola	Apalachicola City Hall	1 Avenue E	Apalachicola	FL	32320
Franklin	Brenda Ash	Apalachicola Commissioner	City of Apalachicola	Apalachicola City Hall	1 Avenue E	Apalachicola	FL	32320
Franklin	Apalachicola Bay Chamber of Commerce		City of Apalachicola		122 Commerce Street	Apalachicola	FL	32320
Franklin	Franklin Mathes	City of Carrabelle Commissioner	City of Carrabelle		1001 Gray Ave.	ray Ave. Carrabelle		32322
Gulf	Jim Anderson	Port St. Joe City Manager	City of Port St. Joe	P.O. Box 278		Port St. Joe	FL	32457
Gulf	Tony Justice	Mayor Pro-Tem of Wewahitchka, Commissioner Ward III	City of Wewahitchka	PO Box 966	318 South 7th Street			32465
Gulf	Donald Minchew	City Manager	City of Wewahitchka	PO Box 966	318 South 7th Street	Wewahitchka	FL	32465
Liberty	Brigham S. Shuler	Bristol City Council Chairperson	City of Bristol		12444 NW Virginia G Weaver St.	Bristol	FL	32321
Walton	Hayward Thomas	Mayor of Paxton	City of Paxton	PO Box 5200		Paxton	FL	32538
Walton	Henry Ennis, Sr.	DeFuniak Springs Council Member, Mayor Pro-Tem	City of DeFuniak Springs	PO Box 685	71 US Hwy 90 West	DeFuniak Springs	FL	32433
Walton	Earl King	Freeport Council Member	City of Freeport	P.O. Box 339		Freeport	FL	32439
Washington	Linda Cain	Mayor of Chipley	City of Chipley	City Hall	1442 Jackson Ave	Chipley	FL	32428
Washington	Karen Rustin	Chipley City Council, Ward 1	City of Chipley	City Hall	1442 Jackson Ave	Chipley	FL	32428

Entity2	Name	Name2	Company	Address1	Address2	City	State	ZIP
Washington	Tina Sloan	Vernon City Council, President	City of Vernon	Vernon City Hall	2808 Yellow Jacket Drive	Vernon	FL	32462
Cultural								
Tribal	Mr. Robert G. Thrower	Tribal Historic Preservation Officer	Poarch Band of Creek Indians	5811 Jack Springs Road		Atmore	AL	36502
Tribal	Mr. Paul N. Backhouse	Tribal Historic Preservation Officer	Seminole Tribe of Florida	Ah-Tah-Thi-Ki Museum	IC 61 Box 21-A Clewiston		FL	33440
Tribal	Paul N. Backhouse, PhD	Tribal Historic Preservation Office	Seminole Tribe of Florida	30290 Josie Billie Highway, PMB 1004		Clewiston	FL	33440
Tribal	Bradley M. Mueller, M.A., Supervisor	Compliance Review Section	Seminole Tribe of Florida	30290 Josie Billie Highway, PMB 1004		Clewiston	FL	33440
Tribal	Mr. Emman Spain	Tribal Historic Preservation Officer	Muscogee (Creek) Nation	P.O. Box 580		Okmulgee	ОК	74447
Tribal	Mr. Fred Dayhoff	NAGPRA/Section 106 Representative	Miccosukee Tribe of Indians of Florida	P.O. Box 440021		Miami	FL	33144
Tribal	Mr. Charles Coleman	Tribal Historic Preservation Officer	Thlopthlocco Tribal Town	P.O. Box 188		Okemah	ОК	74859- 0188

NEWSPAPER DISPLAY ADVERTISEMENT



The U.S. Air Force Invites You to Attend Public Scoping Meetings for the Proposed Gulf Regional Airspace Strategic Initiative (GRASI) Landscape Initiative

Proposed Action

The Air Force is issuing this notice to advise the public of its intent to prepare an Environmental Impact Statement (EIS). The Gulf Regional Airspace Strategic Initiative (GRASI) Landscape Initiative (GLI) is a U.S. Air Force-led partnership with the State of Florida and other state and federal agencies to expand the capacity of the region to safely host military training operations.

The Air Force's Proposed Action is to utilize Blackwater River State Forest (BRSF) and Tate's Hell State Forest (THSF) for establishing helicopter landing and drop zones, airstrips, and a number of different land and air training activities that currently occur within the interstitial areas (areas between designated test/training sites) of the Eglin Air Force Base (AFB) Range. The Air Force is also proposing to establish up to 12 radar, telemetry, and training emitter sites throughout northwest Florida. The emitter sites would support development of an integrated air defense system, which would provide unique, viable, and robust air training.

Environmental Impact Statement (EIS)

Pursuant to the National Environmental Policy Act, the Air Force will prepare an EIS, which will assess the potential environmental consequences of the GLI.

Public Scoping Meetings - Please Attend

Public scoping meetings are being held to inform the public about the proposed action and alternatives under consideration and to "scope" important issues to evaluate in the EIS. The meetings will begin at 6 p.m. with an open house, with an Air Force presentation starting at 6:30 p.m., followed by an opportunity for public comment. Your input is valuable and assists the Air Force in making more informed decisions.

Dates	Scoping Meeting Locations					
8/27/13	Milton Community Center, Gracie Room, 5629 Byrom St., Milton, FL					
8/28/13	Blountstown Civic Center, 17773 Ne Pear St., Blountstown, FL					
8/29/13	Apalachicola Community Center, 1 Bay Ave., Apalachicola, FL					

Public Comment

For more information or to submit written comments, please visit the project website at grasieis.leidoseemg.com or contact: Mr. Mike Spaits, Eglin AFB Public Affairs Office, 96 TW/PA, 101 W. D Ave., Room 238, Eglin AFB, FL 32542-5499; (850) 882-2836; spaitsm@eglin.af.mil. The Air Force will accept comments at any time during the environmental analysis process. However, to ensure the Air Force has sufficient time to consider public input in the preparation of the draft EIS, please submit comments by September 12, 2013!

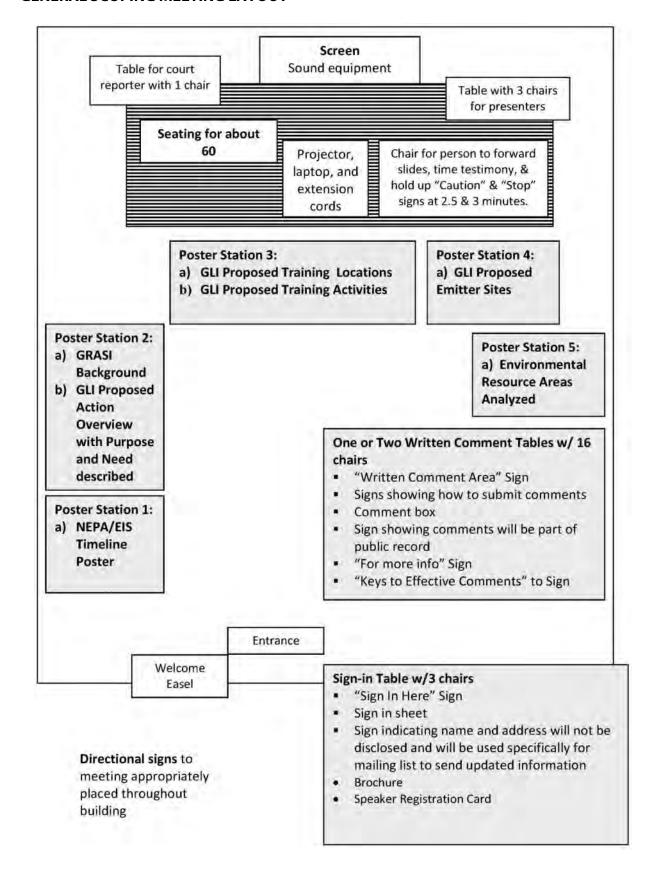
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ADDENDUM B SCOPING MEETING MATERIALS

GENERAL SCOPING MEETING LAYOUT
LOGISTICAL SIGNS
SIGN-IN SHEET
HANDOUT
POSTER DISPLAYS
PRESENTATION

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GENERAL SCOPING MEETING LAYOUT



LOGISTICAL SIGNS











For More Information Contact:

Mr. Mike Spaits
Eglin AFB Public Affairs Office
96 TW/PA
101 W. D Ave., Room 238
Eglin AFB, FL 32542-5499

(850) 882-2836

spaitsm@eglin.af.mil



Please Place Comments Here





Written Comment Area



DISCLOSURE STATEMENT REQUIRED BY THE PRIVACY ACT OF 1974

- 1. Authority: 23 U.S.C. paragraphs 557a, 557b, 595, 709a.
- Principle Purpose: Your name, address and comments, if provided during this process may be:
 - Used to compile mailing lists for sending project reports, brochures, and other information concerning the NEPA process.
 - Forwarded to Federal, state and local agencies and elected officials.
 - Used to compile mailing lists for other projects in which the person supplying the information might have an interest.
 - Compiled in a Record of Public Meeting and made available to the public.
 - Published in project reports and made available to interested individuals and groups.
 - Nonetheless, we will not publish private address information in the draft environmental analysis.







Eglin Air Force Base, Florida

How to Make Your Comments Count

Commenting on public policy issues or documents as a private citizen can be daunting, especially if the issues are technical. Consider the suggestions below to make it easier and more effective to participate in the National Environmental Policy Act (NEPA)/Environmental Impact Analysis Process (EIAP).

Offer ideas for issues to be considered and alternatives to be evaluated.

Collect information on the issues, including laws, regulations, agency materials or guidance. Sign up for the project mailing list. Make a checklist of the issues you want addressed. Explain how proposed actions may affect you. Give examples. Tell what you do support as well as what you don't. Cover the following:

- Establish your authority to comment, whether it is as a concerned citizen, representative of an interest group, or an expert.
- · For extensive comments, summarize your major concerns first, then describe them in detail.
- If you are recommending changes to a document, suggest specific language when possible.
- If you know of technical information that should be reviewed and considered during the
 environmental analysis, please explain why and provide a reference or copies of back-up material.
- · Offer solutions draw on your expertise as an interested stakeholder to suggest innovative ideas.

If you are presenting your comments verbally, consider these format and style suggestions:

- · Start by offering general or summary comments.
- · Use topic sentences and short sentences.
- · Avoid asking questions rather, pose your questions as comments to be considered.
- · Be respectful of your fellow commentors and agency representatives.

Finally, understand comment deadlines and processes.

During scoping, your comments will be considered for environmental analysis and may be used to modify the proposal.

Stay Updated.

For additional information, contact:

Mr. Mike Spaits Eglin AFB Public Affairs Office 96 TW/PA 101 W. D Ave., Room 238 Eglin AFB, FL 32542-5499

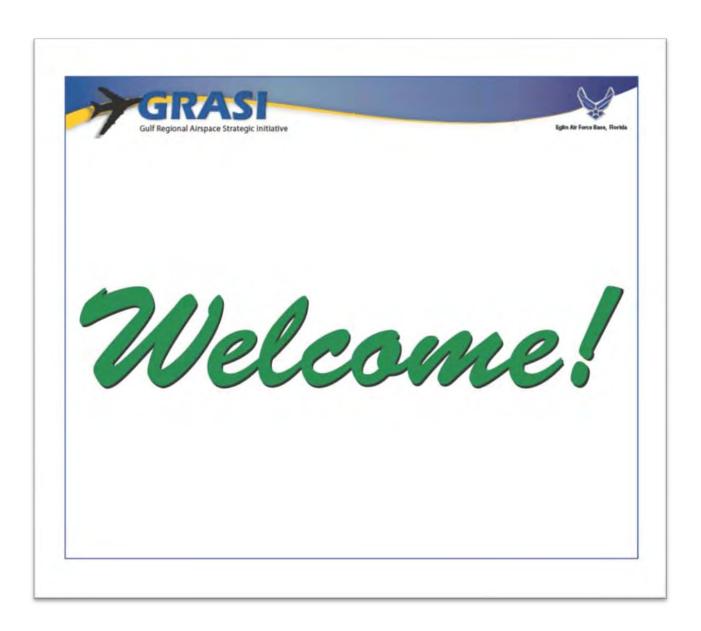
(850) 882-2836

spaitsm@eglin.af.mil



Welcome!

Scoping Meeting for the GRASI Landscape Initiative Environmental Impact Statement (EIS)





Verbal Comment Recording Station

SIGN-IN SHEET

J. G.VISI	
Gulf Regional Airspace Strategic Initiative	ligitin Air Force Base, Florida
LOCATION: M. HOO THANK YOU FOR ATTENDING THE GRASI LANDSCAPE INITIATIVE SCOPING MEETINGS. PLEASE SIGN	IN! DATE: \$/27/13
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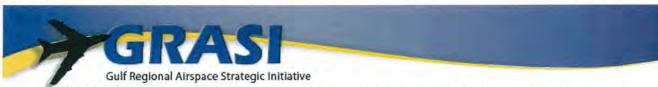


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HANDOUT





Eglin Air Force Base, Florida

-WELCOME-



Welcome to this scoping meeting for the U.S. Air Force proposal to conduct training activities on state forests and to establish emitter sites in northwest Florida under the Gulf Regional Airspace Strategic Initiative (GRASI) Landscape Initiative.

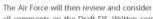
A Draft Environmental Impact Statement (EIS) will be prepared pursuant to the National Environmental Policy Act (NEPA) to document anticipated environmental

consequences. NEPA requires any federal agency proposing any action or actions that may impact the human environment to consider the following: $\frac{1}{2} \left(\frac{1}{2} \right) = \frac{1}{2} \left(\frac{1}{2} \right) \left(\frac{1$

- · A range of reasonable alternatives (including no action)
- · The purpose and need for action
- · Social and economic effects
- · Environmental consequences
- · Potential human health consequences
- · Public and government agency input

Pursuant to the NEPA regulations, the Air Force will invite public participation during the EIS process as shown to the right. The GRASI Landscape Initiative EIS is in the scoping stage, which is the process the Air Force uses to "scope" issues to address in the environmental analysis.

Once the Draft EIS is available, the public will be able to review the document and will have an opportunity to comment on the findings in the Draft EIS.



all comments on the Draft EIS. Written comments and verbal testimony from the public hearings become part of the public record for decision makers to consider, along with other factors, prior to making any decision regarding the proposed action. Substantive comments will be responded to in appendices to the Final FIS.



A Notice of Availability of the Final EIS will be published in the Federal Register marking the beginning of a 30-day waiting period. During that time, the public may review and submit additional comments for the Air Force's

After the 30-day waiting period, the Air Force will make a decision either to re-address aspects of the EIS or to sign the Record of Decision. The Record of Decision explains the project decision as completely as possible, based on information contained in the Final EIS, including the specific mitigations for the proposed action.

		Opportunity for Public Involvemen						
7700	113	Federal Register and Media Publication of Notice of Intent to Prepare an EIS August 12, 2013						
	August	EIS Scoping Period August 12-September 12, 2013						
	September	Refinement of Proposed						
	October	Action and Alternatives and Preparation of Draft EIS Fall 2013						
	November	Federal Register Publication of Notice of Availability of Draft EIS End of 2013						
	December	Draft EIS Public Comment Period End of 2013 to						
	2014 December	Beginning of 2014						
	rebruary	Preparation of Final EIS Winter to Spring 2014						
77.	Metch	Federal Register Publication of Notice of Availability of Final EIS Spring 2014						
	April	30-day Final EIS Waiting Period Spring 2014						
	May	Record of Decision Spring or Summer 2014						

Public participation is an integral part of the NEPA process and we appreciate your involvement.



GRASI Landscape Initiative Environmental Impact Statement

The GRASI Landscape Initiative Proposed Action consists of two main components: using northwest Florida state forests for nonhazardous training activities and establishing and using emitter sites. The purpose of the Air Force's Proposed Action is to build additional regional capacity for nonhazardous training operations that can be conducted outside

restricted areas*. This would be accomplished through two types of partnerships: PROPOSED ACTION: Use Northwest Florida State Forests for Training Activities

- from Eglin/Hurlburt Field
- available roads and infrastructure minimal to no improvements
- aircraft landing areas

CRITERIA: 2.5 to 3 hours driving distance from Eglin Air Force Base

- at least 0.75 acre in size accessible via improved roadways
- adequate line of sight (e.g., not surrounder by tall trees or utility poles/wires)
 utilities, communications, and security

clear of populated areas

ACCOMPLISHED BY:

Air Force partners with the State of Florida to utilize Blackwater River and Tate's Hell State Forest BRSF and THSF) for nonhazardous training activitie on an as-needed basis. Activities would be compatible with the state forests, and would not involve live munitions, substantive land disturbance, or construction activities

Air Force partners with Florida Forest Service (FFS) and Florida Fish and Wildlife Conservation Commission (FWC) for use of small, noncontiguous land areas throughout the region for placement of temporary and mobile training radar emitters.

RESULT The GRASI Landscape Initiative Proposed Action would accomm of new military missions by increasing the regional capacity for military operations.

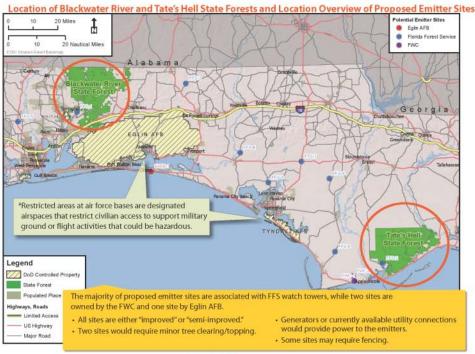
WHY IS THE PROPOSED ACTION NEEDED?

The Proposed Action is needed because hazardous testing activities utilizing restricted areas over Eglin AFB have greater scheduling priority than nonhazardous training activities occurring under restricted areas, and as a result there are often scheduling conflicts for nonhazardous training. Additional land areas in the GRASI region are necessary to enhance military training capabilities and deconflict scheduling issues, thereby improving training.

By utilizing the GRASI landscape, the geographic scope of military training would more closely resemble that of actual combat scenarios. Ground units would be able to practice over a larger and more diverse area. Establishing new nonhazardous training areas and placing training emitters in remote locations would also improve training outcomes through better scheduling and reduce the competing demands on restricted areas.

NO ACTION ALTERNATIVE

Under the No Action Alternative, the training activities identified under the Proposed Action would continue to occur on Eglin AFB; BRSF and THSF would not be utilized. and no new emitter sites would be established.





GRASI Landscape Initiative Proposed Emitter Sites

Under the GRASI Landscape Initiative EIS, the Air Force is proposing to establish up to 12 radar, telemetry, and training emitter sites throughout northwest Florida. The emitter sites would support development of an integrated air defense system (IADS), which would provide unique, viable, and robust air training.

WHAT IS AN EMITTER?

An emitter is a transmitter that sends radio signals to track aircraft and navigation or to simulate enemy threats. Training emitters are located on the ground beneath an aircrew's route or near training airspace to simulate threats "fired" at pilots and to track aircrew performance.



Radar and Telemetry Emitters

Radar and telemetry emitters are used for tracking aircraft and navigation. Typical radar and telemetry units would consist of Kineto Tracking Mount (KTM) and Mobile Cinetheodolite Mount (MCM) systems.



Threat Emitters

Threat emitters are radar simulator systems designed to help train military personnel to identify and counter enemy missile or artillery threats from land or sea. Typical threat emitters include multi-threat emitters such as the joint threat emitter (JTE).

GRASI Background

GRASI Regional Airspace



Six military installations call the area home:

- 1. Eglin Air Force Base (AFB)
- 2. Tyndall AFB
- 3. Naval Air Station (NAS) Pensacola
- 4. Fort Rucker
- 5. Hurlburt Field
- 6. Whiting Field

The 2005 Base Realignment and Closure Act recommendations assigned F-35 Joint Strike Fighters to Eglin AFB, realigned the 7th Special Forces Group (Airborne) to Eglin AFB, moved additional aviation training to NAS Pensacola, and created an Air Integrated Weapons and Armaments Research, Development and Acquisition, Test and Evaluation Center at Eglin AFB. Installations across the region expect growth of preexisting missions and an increase in student populations and training readiness activities.

The Gulf Regional Airspace Strategic Initiative (GRASI) is a U.S. Air Force-led partnership with the State of Florida and other states and federal agencies to ensure near optimum use of airspace by civilians and the military throughout the Gulf Coast region, which includes northwest Florida, southern Mississippi, Iower Alabama, southern Georgia, and the eastern Gulf of Mexico.

To accomplish training missions, both bases at Eglin and Tyndall have a need for flights to surrounding airfields, within designated military training airspace and between both bases. Since regional growth is not limited to the military and is dependent upon civilian (including business and commercial) flights having access to safe and navigable airspace, military planners realized the region needed a strategic vision and a coordinated approach to enable the regional airspace to function well. Thus the GRASI was initiated. The Department. of Defense (DoD) brought all of the relevant stakeholders together for the GRASI, a collaborative effort between military and civilian leaders to expand the airspace capacity of the region and to support the area in safely hosting military test and training operations. The initiative documented the requirements of all airspace users, established a strategic vision, modeled all of the airspace in the region, and recorded objectives for stakeholders to implement.

The entire GRASI planning process, goals, objectives, and strategies are available in the GRASI Strategic Plan, available at http://grasi.leidoseemg.com.



Proposed GRASI Landscape Initiative Training Locations

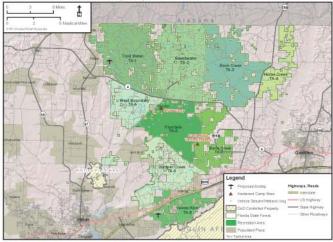
Training activities associated with the Proposed Action consist of establishing helicopter landing and drop zones, airstrips, and a number of different land and air training activities; these activities currently occur within the interstitial areas (areas between designated test/training sites) of the Eglin AFB Range. The Air Force proposes to utilize Blackwater River and Tate's Hell State Forests (BRSF and THSF), by leasing the use of the lands through agreements with the Florida Forest Service (FFS). For the purposes of this Environmental Impact Statement (EIS), each state forest has been divided into "tactical areas" (TAs), which correlate to existing state forest recreational areas. Training activities may occur in any of the TAs, with consideration of:

- restrictions identified via coordination with the FFS during the planning process, and
- · constraints or mitigations identified in this EIS.

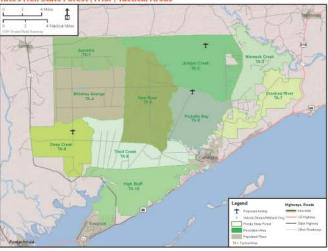
While the FFS further segments each recreational area into smaller management units, this EIS uses the TA level to provide a cohesive, holistic overview of training and associated impacts. This information can be used for TA and management unit scheduling, as well as future planning and tiering as training locations change over time. Training activities may occur in any of the TAs, with consideration of restrictions identified via coordination with the FFS during the planning process, as well as any constraints or mitigations identified in this EIS.

For all training activities, operators must adhere to respective state forest management plan requirements. Such requirements include contacting the respective forest's dispatch to identify campground activity for avoidance of inhabited recreational areas. In addition, no digging would be allowed, and personnel must collect all waste/used expendables.

Blackwater River State Forest (BRSF) Tactical Areas



Tate's Hell State Forest (THSF) Tactical Areas



Who Would be Training on the State Forests?

The main groups conducting training in the two state forests consist of:

- multiple units organized under the Air Force Special Operations Command (AFSOC) located at Hurlburt Field and
- the 7th Special Forces Group (Airborne) located at Eglin AFB.

Other groups may also utilize BRSF and THSF intermittently as needed. However, regardless of which groups use these areas for training, the activities and associated expendables would be the same.

How Does the Military Engage in these Training Activities?

The training activities are not mutually exclusive and would occur in support of other activities or subsequent to other training activities. An example would be a training mission involving several helicopters flying from Eglin AFB to a BRSF Tactical Area Helicopter Landing Zone/Drop Zone where personnel and



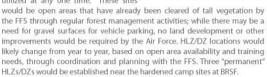
equipment would be dropped via an Airdrop or a Low-Level Helicopter Insertion/Extraction. Personnel may then conduct cross-country dismounted movement training to the Short-Term Offender Program (STOP) Camp or another Helicopter Landing Zone, while along the way Bivouacking, conducting Communications and Surveillance Operations, and engaging in the Use of Expendables. Upon reaching their objective, trainees would be extracted either via another Low-Level Helicopter Insertion/Extraction or Cross-Country Vehicle Movement.



HELICOPTER LANDING ZONES (1- 2.75 ACRES) / DROP ZONES (>0.3 ACRE) (HLZ/DZs)

HLZ/DZs are existing cleared areas within the state forests utilized as landing sites for helicopters and drop zones for personnel and equipment from various aircraft (either fixed- or rotary-wing).

Several sites located throughout the state forests may be established and utilized at any one time. These sites



USE OF EXPENDABLES (UoEX)



UoEX involves use of various training munitions and pyrotechnics, including simulated munitions (consisting of plastic pellets or paintballs, which produce little or no noise) and smoke grenades during training activities.

At BRSF, noise-generating expendables (e.g., blanks) would only be used at hardened camp site locations. At THSF,

noise-generating expendables could be used anywhere (pending results of analysis and consideration of use restrictions as identified in this EIS).

LIGHT AVIATION PROFICIENCY TRAINING (LAPT)

LAPT involves use of airstrips established at BRSF TA-2 (Munson), TA-1 and TA-9 and at THSF TA-2, TA-6 and TA-8, for fixed-wing aircraft takeoff and landing training.

Aircraft would fly from the surface to approximately 3,000 feet above ground level (AGL) 90 percent of the time and up to 10,000 feet AGL the remaining 10 percent of the time based on training requirements.

LOW-LEVEL HELICOPTER INSERTIONS/ EXTRACTIONS (LLHI/E)

LLHI/E involves flying helicopters near treetop level and above to an HLZ/DZ and insertion or extraction of personnel via fast rope, rappel, ladder, hoist or other means.



Aircraft would fly between just above the surface to 3,000 feet AGL.

TEMPORARY COMBAT SUPPORT AREAS (TCSAs)



TCSAs involve setting up logistical and medical tents and equipment around HLZs/DZs and airstrips in support of training activities.

Activities include loading/unloading of supplies, setting up tents and other equipment, and providing logistics support and medical treatment of simulated casualties. This may also

include establishing temporary defensive positions (e.g., sandbag bunkers); digging of foxholes or latrines would not occur.

ESTABLISHMENT AND UTILIZATION OF AIRSTRIPS FOR FIXED-WING AIRCRAFT LANDINGS, TAKEOFFS, AND TOUCHDOWNS IN SUPPORT OF TRAINING ACTIVITIES

At BRSF, one existing airfield would be utilized (Munson Airfield—currently designated for public use with no restrictions), and two dirt roadways (one in TA-1 and one in TA-9) are proposed for use as airstrips. At THSF, three dirt roadways are proposed for use as airstrips. These roadways are located in TA-2.-6. and -8.

Proposed locations would not change in the near future. The roadway airstrips would need to be approximately 30 feet wide by 2,000 feet long. All roadway airstrips need bush hogging, which may be accomplished as part of regular forest road management activities. Road improvements such as widening or compacting may be necessary at each location. There would be no paving or addition of impervious surface at any of the proposed airstrips.





AIRDROPS (ADs)

ADs involve the insertion and/or resupply of personnel via release of troops or equipment over land-based DZs or over water.

Aircraft would fly at 1,250 feet AGL for static line drops and up to 25,000 feet AGL for free fall drops depending on personnel and equipment type and requirements. During an AD, the aircraft typically makes first contact at the DZ, flying between 500 to 1,000



feet AGL, conducts the drop, and then moves to orbit at 5,000 feet AGL, typically offset from the DZ by about 5 to 10 miles with run-in typically at 130 knots indicated air speed (KIAS).

AIR/LAND VERTICAL LIFT (A/LVL)



A/LVL involves the insertion and/or resupply of personnel and/or equipment via landing an aircraft directly into an HLZ or on an airstrip.

This activity would be in support of training activities. Aircraft would fly from the surface to approximately 3,000 feet AGL 90 percent of the time and up to 10,000 feet AGL the remaining 10 percent

of the time based on training requirements.

CROSS-COUNTRY DISMOUNTED MOVEMENTS (CCDM)

CCDM involves the movement of operators (i.e., personnel) on foot across land areas from one location to another.

CCDM may occur on or off roads or on unimproved trails. CCDM may also include crossing of streams and wetland areas.



CROSS-COUNTRY VEHICLE MOVEMENT (CCVM)

CCVM involves the movement of personnel transport vehicles (ranging from humvees to 2.5-ton trucks) and all-terrain vehicles (ATVs) across established roads from one location to another.



FORWARD AIR REFUELING POINT/HOT GAS OPERATIONS (FARP/HGO)



FARP/HGO involves the transfer of fuel during refueling operations from aircraft to aircraft or refueling truck to aircraft with aircraft engines running.

VEHICLE STREAM AND WETLAND CROSSING (VSWC)



VSWC involves fording of intermittent and perennial streams and wetlands by military vehicles at established crossing points established and utilized by the FFS.

BLACKOUT DRIVING (BD)

BD involves nighttime driving of ATV-type vehicles and high-mobility multipurpose wheeled vehicles (HMMWVs, or "humvees") without full headlights.

Headlights would be diminished to "cat eyes," which are essentially small slits placed over the headlights to provide enough light to utilize night vision goggles while driving. Roads used for this activity would be temporarily closed to the public to prevent safety mishaps.

EMPLACEMENT OF OBSTACLES (EOO)

EOO is the placement of concertina wire, stakes and/or pickets along unpaved roads and hardened camp sites

The ground surface may be slightly disturbed (within 6 inches of ground surface) from placement of stakes and pickets. All wire, stakes and/or pickets will be recovered at completion of the training exercise.



BIVOUACKING/ESTABLISHMENT OF ASSEMBLY AREAS (B/EOAA)

B/EOAA involves the establishment of an area, mainly tented, where troops eat and rest overnight in support of training activities.

There may be slight ground disturbance (within 6 inches of ground surface) from placement of tent stakes and pickets. All expendables/equipment would be recovered prior to leaving the site.





COMMUNICATIONS AND SURVEILLANCE OPERATIONS (C&SO)

C&SO is the establishment of sites to coordinate communications and/or conduct surveillance of "enemy forces" in support of training activities.

The ground surface may be slightly disturbed from placement of tent stakes and pickets.

AMPHIBIOUS OPERATIONS (AO)



AO are boat operations on the water, loading/unloading of personnel to and from boats, and movement in streams, rivers, lakes as part of egress/ingress operations.

NATURAL RESOURCE CONSUMPTION (NRC)

NRC involves the procurement of natural food sources, such as vegetation and small game and rodents (utilizing survival techniques such as trapping/snaring). Locations of avoidance areas (e.g., sensitive habitat areas and species) would be communicated to participants prior to implementation of the activity.

OVERWATER HOIST OPERATIONS (OHO)



OHO involves hoist rescue and recovery of personnel and watercraft over water.

Aircraft would conduct operations from just above the surface of the water to a height of about 150 feet. Aircraft would hover about 10 feet over the surface for drops and about 80 feet above the surface for retrievals.

OPPOSING FORCES VEHICLE OPERATIONS (OFVO)

OFVO involves two teams (one "Red," the other "Blue") competing to locate each other on established roads in a simulated urban environment.

Personnel may exit vehicles to conduct "search activities." Aircraft may be

used as a "spotter" to direct one of the teams; the aircraft would fly between 16,000 and 23,000 feet AGL.



HARDENED CAMP SITE USE (HCSU)

HCSU involves the use of two hardened camp facilities located at BRSF.

Both camps were established by the Florida State Department of Juvenile Justice (DJJ); one is identified as the STOP Camp, the other is the Santa Rosa Youth Academy (SRYA). The STOP Camp was leased by the DJJ from the FFS and returned after the program was shut down. The DJJ has recently notified the FFS that it intends to vacate its lease of the SRYA.

These sites consist of buildings (classrooms, administrative buildings, dormitories, dining facilities, and assembly areas) and infrastructure, such as utilities and roadways, and may be used as insertion/extraction points, HLZs/DZs, command and control centers, training areas for combat in urban environment training, or other training activity support.





Resource Areas Potentially Affected by Proposed Action Components

The table below summarizes the training activities proposed for BRSF and THSF and the resource areas potentially affected.

	Resource Area Potentially Affected											
Proposed Action Component	Airspace	Noise	Safety	Air Quality	Soils / Erosion	Water	Biological	Cultural	Land Use	Socio / EJ	Haz / Solid Mat / Waste	Infrastructure
Emitter Sites	•	•	•	•	•				•	•	•	•
Helicopter Landing Zones/Drop Zones			•	•	•		•	•	•			•
Establishment of Airfields			•	•	•		•	•	•			•
Use of Expendables		•	•	•			•		•	•	•	
Light Aviation Proficiency Training	•	•	•	•						•		
Low-Level Helicopter Insertions/ Extractions	•	•	•	•			•		•	•		
Temporary Combat Support Areas					•	•	•	•	•	•	•	•
Airdrops	•	•	•	•			•		•	•		
Air/Land Vertical Lift	•	•	•	•			•		•	•		
Forward Air Refueling Point/Hot Gas Operations											•	•
Cross-Country Dismounted Movements			•	•	•	•	•	•	•	•		•
Cross-Country Vehicle Movement		•	•	•	•	•	•	•	•	•		•
Vehicle Stream and Wetland Crossing		•	•	•	•	•	•	•				•
Blackout Driving			•	•			•					•
Emplacement of Obstacles			•		•	•	•	•	•	•		
Bivouacking/Assembly Areas			•		•	•	•	•	•	•	•	•
Communications and Surveillance Operations			•		•		•		•	•		•
Amphibious Operations		•	•	•	•	•	•	•	•	•		
Natural Resource Consumption			•	•	•	•	•	•	•	•	•	•
Overwater Hoist Operations	•	•	•	•		•	•		•	•		
Opposing Forces Vehicle Operations		•	•	•	•	•	•		•	•		•
Hardened Camp Site Use		•	•	•	•	•	•	•	•	•		•

Scoping Public Comment Period

The scoping process is the best time for the public and other government agencies and representatives to review the proposed action and alternatives, identify issues or concerns, and provide recommendations, alternatives, and improvements to the Air Force for consideration or environmental analysis. Please submit comments to the mailing address below or via the GRASI Landscape Initiative EIS website (grasieis.leidoseemg.com) before September 12, 2013.

Mr. Mike Spaits, Eglin AFB Public Affairs Office 96 TW/PA, 101 West D Avenue, Room 238 Eglin AFB, FL 32542-5499

The final decision will not be made until all the above is considered. The final decision will be announced in a Record of Decision scheduled for 2014.

Your involvement and participation are essential to the decision making process.

POSTER DISPLAYS



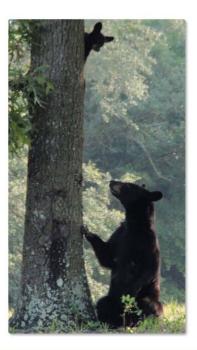


Eglin Air Force Base, Florida

The National Environmental Policy Act (NEPA) and the Environmental Impact Statement (EIS) Process

The National Environmental Policy Act requires any federal agency proposing any action or actions that may impact the human environment to consider:

- a range of reasonable alternatives (including no action)
- · the purpose and need for action
- · social and economic effects
- environmental consequences
- · potential human health consequences
- · public and government agency input





For this Proposed Action, NEPA regulations require the Air Force to prepare an EIS to document anticipated environmental consequences of proposed actions and alternatives.

Why Does Eglin Need an EIS?

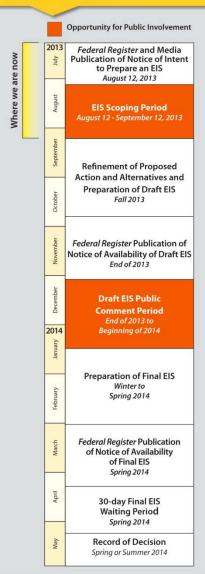
- The scope of the GRASI Landscape Initiative EIS is significant and will impact the community and local environment.
- An EIS will provide decision-makers the best information to understand potential impacts of each alternative and make an informed decision.

Please take this opportunity to:

- · Learn about the proposal
- · Identify any individual or communityspecific issues
- · Put yourself on our mailing list



Anticipated Timeframe for Completion of the NEPA Process



The GRASI Landscape Initiative EIS is in the scoping stage, which is the process the Air Force uses to scope issues to address in the environmental analysis. The scoping process is the best time for the public and other government agencies and representatives to review the proposed action and alternatives; identify issues or concerns; and provide recommendations, alternatives, and improvements to the Air Force for consideration or environmental analysis.

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(850) 882-2836, or spaitsm@eglin.af.mil.

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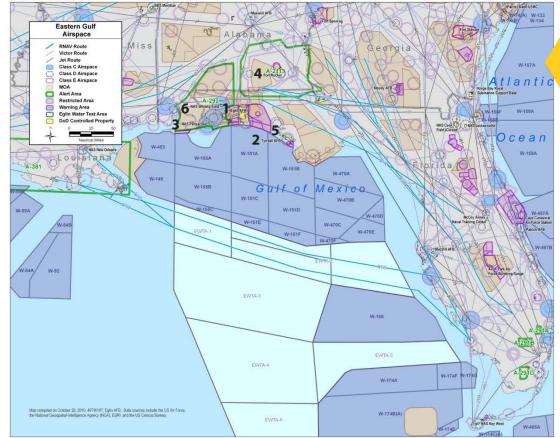




Background of the Gulf Regional Airspace Strategic Initiative (GRASI)

The Gulf Regional Airspace Strategic Initiative (GRASI) is a U.S. Air Force-led partnership with the State of Florida and other states and federal agencies to ensure near optimum use of airspace by civilians and the military throughout the Gulf Coast region, which includes **northwest Florida**, southern Mississippi, lower Alabama, southern Georgia, and the eastern Gulf of Mexico.

GRASI Regional Airspace



Six military installations call the area home:

- 1. Eglin Air Force Base (AFB)
- 2. Tyndall AFB
- 3. Naval Air Station (NAS) Pensacola
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- 5. Hurlburt Field
- 6. Whiting Field

The 2005 Base Realignment and Closure Act recommendations assigned F-35 Joint Strike Fighters to Eglin AFB, realigned the 7th Special Forces Group (Airborne) (7 SFG[A]) to Eglin AFB, moved additional aviation training to NAS Pensacola, and created an Air Integrated Weapons and Armaments Research, Development and Acquisition, Test and Evaluation Center at Eglin AFB. Installations across the region expect growth of preexisting missions and an increase in student populations and training readiness activities.

To accomplish training missions, both bases at Eglin and Tyndall have a need for flights to surrounding airfields, within designated military training airspace and between both bases. Since regional growth is not limited to the military and is dependent upon civilian (including business and commercial) flights having access to safe and navigable airspace, military planners realized the region needed a strategic vision and a coordinated approach to enable the regional airspace to function well.

Thus the GRASI was initiated. The Department of Defense (DoD) brought all the relevant stakeholders together for the GRASI, a collaborative effort between military and civilian leaders to expand the airspace capacity of the region and to support the area in safely hosting military test and training operations. The initiative documented the requirements of all airspace users, established a strategic vision, modeled all of the airspace in the region, and recorded objectives for stakeholders to implement.







GRASI Landscape Initiative (GLI) Environmental Impact Statement

The GLI Proposed Action (a component of the GRASI) consists of two main components: using northwest Florida state forests for nonhazardous training activities and establishing and using emitter sites. The purpose of the Proposed Action (the GLI, a component of the GRASI) is to build additional regional capacity for nonhazardous operations that can be conducted outside restricted areas. This would be accomplished through two types of partnerships.

Use Northwest Florida State Forests for Training Activities

PROPOSED ACTION:

Establish and Use Emitter Sites

CRITERIA:

- 1.5-hour drive/1-hour flight time from Eglin/ Hurlburt Field
- available roads and infrastructure for access
- minimal to no improvements available
- aircraft landing areas

• 2.5 to 3 hours driving distance from Eglin Air Force Base

- at least 0.75 acre in size
- · accessible via improved roadways
- adequate line of sight (e.g., not surrounded by tall trees or utility poles/wires)
- utilities, communications, and securityclear of populated areas

ACCOMPLISHED BY:

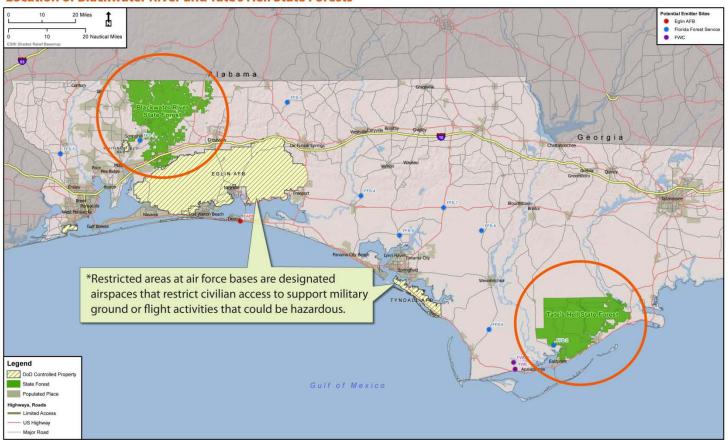
Air Force partners with the State of Florida to utilize Blackwater River and Tate's Hell State Forests for nonhazardous activities on an as-needed basis. Activities would be compatible with the state forests, and would not involve live munitions, substantive land disturbance, or construction activities.

Air Force partners with the Florida Forest Service (FFS) and Florida Fish and Wildlife Conservation Commission (FWC) for use of small, noncontiguous land areas throughout the region for placement of temporary and mobile training radar emitters.

RESULT:

The GLI Proposed Action would accommodate a combination of new military missions by increasing the regional capacity for military operations.

Location of Blackwater River and Tate's Hell State Forests



WHY IS THE PROPOSED ACTION NEEDED?

The Proposed Action is needed because hazardous testing activities utilizing restricted areas over Eglin AFB have greater scheduling priority than nonhazardous training activities occurring under restricted areas, and as a result there are often scheduling conflicts for nonhazardous training. Additional land areas in the GRASI region are necessary to enhance military training capabilities and deconflict scheduling issues, thereby improving training.



By utilizing the GRASI landscape, the geographic scope of military training would more closely resemble that of actual combat scenarios. Ground units would be able to practice over a larger and more diverse area. Establishing new nonhazardous training areas and placing training emitters in remote locations would also improve training outcomes through better scheduling and reduce the competing demands on restricted areas.

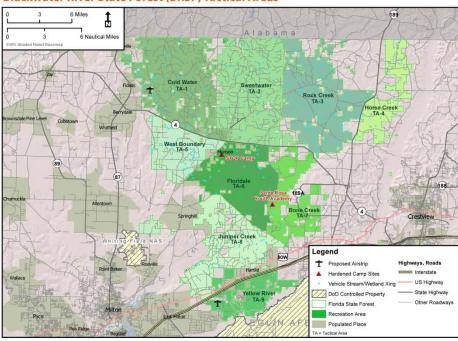




Proposed GRASI Landscape Initiative Training Locations

Training activities associated with the Proposed Action currently occur within the interstitial areas (areas between designated test/training sites) of the Eglin AFB Range. The Air Force proposes to utilize Blackwater River State Forest (BRSF) and Tate's Hell State Forest (THSF), by leasing the use of the lands through agreements with the Florida Forest Service (FFS).

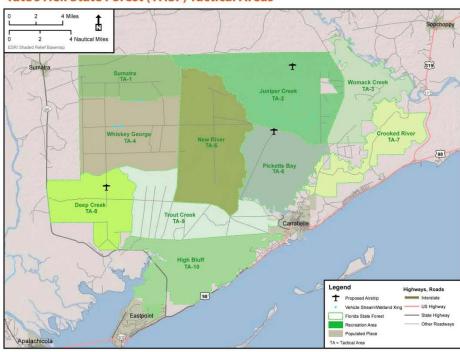
Blackwater River State Forest (BRSF) Tactical Areas



For the purposes of this Environmental Impact Statement (EIS), each state forest has been divided into "tactical areas" (TAs), which correlate to existing state forest recreational areas. Training activities may occur in any of the TAs, with consideration of:

- · restrictions identified via coordination with the FFS during the planning process, and
- · constraints or mitigations identified in this EIS.

Tate's Hell State Forest (THSF) Tactical Areas



How Does the Military Engage in these Training Activities?

The training activities mutually exclusive and would occur in support of other activities subsequent to other training activities. An example would be a training mission involving several helicopters flying from Eglin AFB to BRSF Tactical Area Helicopter Landing Zone/Drop Zone where personnel and equipment would be



dropped via an Airdrop or a Low-Level Helicopter Insertion/Extraction. Personnel may then conduct Cross-Country Dismounted Movement training to the Short-Term Offender Program (STOP) Camp or another Helicopter Landing Zone, while along the way Bivouacking, conducting Communications and Surveillance Operations, and engaging in the Use of Expendables. Upon reaching their objective, trainees would be extracted either via another Low-Level Helicopter Insertion/Extraction or Cross-Country Vehicle Movement.

Who Would be Training on the **State Forests?**

The main groups conducting training in the two state forests consist of:

- multiple units organized under the Air Force Special Operations Command (AFSOC) located at Hurlburt
- the 7th Special Forces Group (Airborne) (7 SFG[A]) located at Eglin AFB.

Other groups may also utilize the BRSF and THSF intermittently as needed. However, regardless of which groups use these areas for training, the activities and associated expendables would be the same.







HELICOPTER LANDING ZONES (1-2.75 ACRES) /DROP ZONES (>0.3 ACRE)

- landing sites for helicopters and drop zones for personnel and equipment from various aircraft (either fixed- or rotary-wing)
- in existing cleared areas within the state forests
- no land development or other improvements
- potential need to gravel surfaces for vehicle parking

USE OF EXPENDABLES (UoEX)

- use of various training munitions and pyrotechnics (blanks, plastic pellets, paintballs, smoke grenades, ground burst simulators, etc.) during training activities
- no live munitions would be used
- at BRSF, used at hardened camp site location:
- at THSF, used anywhere, pending results of analysis and consideration of use restrictions as identified in this EIS



LIGHT AVIATION PROFICIENCY TRAINING (LAPT)

 use of airstrips established at BRSFTA-2 (Munson), TA-1 and TA-9 and at THSFTA-2, TA-6 and TA-8, for fixed-wing aircraft takeoff and landing training

LOW-LEVEL HELICOPTER INSERTIONS/EXTRACTIONS (LLHI/E)

 flying helicopters near treetop level and above to an HLZ/DZ and inserting or extracting personnel via rope, rappel, ladder, hoist or other means



TEMPORARY COMBAT SUPPORT AREAS (TCSAs)

 set up of logistical and medical tents and equipment around HLZs/DZs and airstrips in support of training activities



AIR/LAND VERTICAL LIFT

(A/LVL)

• the insertion and/or resupply of personnel and/or equipment via landing an aircraft directly into an HLZ or on an



FORWARD AIR REFUELING POINT/HOT GAS OPERATIONS (FARP/HGO)

 the transfer of fuel during refueling operations from aircraft or refueling truck to aircraft with aircraft engines running



CROSS-COUNTRY VEHICLE MOVEMENT (CCVM)

 the movement of personnel transport vehicles (ranging from high-mobility multipurpose wheeled vehicles [HMMWVs] to 2.5-ton trucks) and all-terrain vehicles (ATVs) across established roads from one

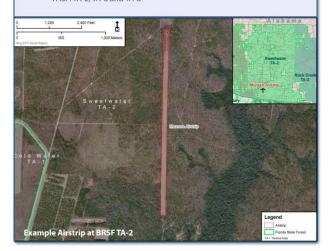
 ATVs include: motorcycles, minibikes, or lightweight tactical ATVs

location to another



ESTABLISHMENT OF AIRSTRIPS FOR FIXED-WING AIRCRAFT LANDINGS, TAKEOFFS, AND TOUCHDOWNS IN SUPPORT OF TRAINING ACTIVITIES

- establishment of airstrips in state forest tactical areas (TAs)
- BRSF: TA-2 (Munson); TA-1; and TA-9
- THSF: TA-2; TA-6 and TA-8



AIRDROPS (ADs)

 the insertion and/or resupply of personnel via release of troops or equipment over land-based DZs or over water from aircraft





CROSS-COUNTRY DISMOUNTED MOVEMENTS (CCDM)

- the movement of operators (i.e., personnel) on foot across land areas from one location to another, on or off roads or on unimproved trails
- may include the crossing of streams and wetland areas







VEHICLE STREAM AND WETLAND CROSSING (VSWC)

• fording of intermittent and perennial streams and wetlands by military vehicles at established crossing points utilized by Florida Forest Service



BLACKOUT DRIVING (BD)

- nighttime driving of ATV-type vehicles and high-mobility multipurpose wheeled vehicles (HMMWVs) without full headlights
- headlights diminished to "cat eyes," which are essentially small slits placed over the headlights to provide enough light to utilize night vision goggles while driving
- $\boldsymbol{\cdot}$ roads used for this activity would be temporarily closed to the public to prevent

BIVOUACKING/ESTABLISHMENT OF ASSEMBLY AREAS (B/EOAA)

- · establishment of an area, mainly tented, where troops eat and rest overnight in support of training activities
- slight surface ground disturbance (within 6 inches of ground surface) from placement of tent stakes and pickets
- · all expendables/equipment would be recovered prior to leaving the site



COMMUNICATIONS AND SURVEILLANCE **OPERATIONS (C&SO)**

 ${\color{red} \bullet} \ establishment \ of \ sites \ to \ coordinate \ communications \ and/or \ conduct \ surveillance \ of$ "enemy forces" in support of training activities

 $\bullet \ ground \ surface \ may \ be \ slightly \ disturbed \ from \ placement \ of \ tent \ stakes \ and \ pickets$

AMPHIBIOUS OPERATIONS (AO)

• boat operations on the water, loading/ unloading of personnel to and from boats, and movement in streams, rivers, lakes as part of egress/ingress operations



OVERWATER HOIST OPERATIONS (OHO)

· hoist rescue and recovery of personnel and watercraft over water



OPPOSING FORCES VEHICLE OPERATIONS (OFVO)

- two teams compete to locate each other on established roads in a simulated urban environment
- personnel may exit vehicles to conduct "search activities"
- aircraft (Cessna 172) may be used as a "spotter" to direct one of the teams (flights between 16,000 and 23,000 feet AGL)



EMPLACEMENT OF OBSTACLES (EOO)

- placement of concertina wire along unpaved roads and at hardened camp sites • ground surface may be slightly disturbed (within 6 inches of ground surface) from placement of stakes and pickets
- · all wire, stakes and/or pickets recovered at completion of training exercise



NATURAL RESOURCE CONSUMPTION (NRC)

- · military procurement of natural food sources, such as vegetation and small game and rodents (utilizing survival techniques such as trapping/snaring)
- locations of avoidance areas (e.g., sensitive habitat areas and species) would be communicated to participants prior to implementation

HARDENED CAMP SITE USE (HCSU)

- use of two BRSF hardened camp facilities as insertion/extraction points, HLZs/DZs, command and control centers, training areas for combat in urban environment training, or other training activity support:
 - 1. STOP Camp leased by the Department of Juvenile Justice from the FFS and returned after the program was shut down
 - 2. Santa Rosa Youth Academy currently intended to be vacated







GRASI Landscape Initiative Proposed Emitter Sites

Under the **GRASI Landscape Initiative EIS**, the Air Force is proposing to establish up to 12 radar, telemetry, and training emitter sites throughout northwest Florida. The emitter sites would support development of an integrated air defense system (IADS), which would provide unique, viable, and robust air training.

WHAT IS AN EMITTER?

An emitter is a transmitter that sends radio signals to track aircraft and navigation or to simulate enemy threats. Training emitters are located on the ground beneath an aircrew's route or near training airspace to simulate threats "fired" at pilots and to track aircrew performance.

Radar and Telemetry Emitters

Radar and telemetry emitters are used for tracking aircraft and navigation. Typical radar and telemetry units would consist of Kineto Tracking Mount (KTM) and Mobile Cinetheodolite Mount (MCM) systems.



Kineto Tracking Mount (KTM)

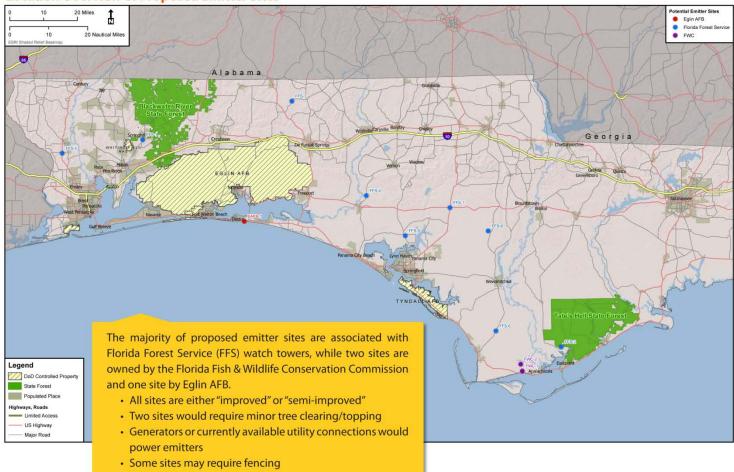
Threat Emitters

Threat emitters are radar simulator systems designed to help train military personnel to identify and counter enemy missile or artillery threats from land or sea. Typical threat emitters include multi-threat emitters such as the joint threat emitter (JTE).



Multi-threat Emitter (JTE)

Location Overview of Proposed Emitter Sites







Resource Areas for Environmental Analysis

The U.S. Air Force understands that the Proposed Action under the GRASI Landscape Initiative would affect environmental resources. As part of the Environmental Impact Statement process, the Air Force will analyze potential environmental effects upon the following resource areas.

Other resource areas may be identified through the scoping process.



- Airspace Management and Use
- Noise
- Safety
- Air Quality
- · Soils / Erosion
- Water Resources
- Biological Resources
 - Vegetation, Sensitive Habitats, Invasive Species
 - Wildlife, Protected Species
- Cultural Resources
- Land Use
- Socioeconomics/Environmental Justice
- Solid & Hazardous Materials / Waste
- Infrastructure
 - Utilities
 - Transportation

Resource Areas Potentially Affected by Proposed Action Components

The table below summarizes the training activities proposed for BRSF and THSF and the resource areas potentially affected.

	Resource Area Potentially Affected											
Proposed Action Component	Airspace	Noise	Safety	Air Quality	Soils / Erosion	Water	Biological	Cultural	Land Use	Socio / EJ	Haz / Solid Mat / Waste	Infrastructure
Emitter Sites	•	•	•	•	•				•	•	•	•
Helicopter Landing Zones/Drop Zones			•	•	•		•	•	•			•
Establishment of Airfields			•	•	•		•	•	•			•
Use of Expendables		•	•	•			•		•	•	•	
Light Aviation Proficiency Training	•	•	•	•						•		
Low-Level Helicopter Insertions/Extractions	•	•	•	•			•		•	•		
Temporary Combat Support Areas					•	•	•	•	•	•	•	•
Airdrops	•	•	•	•			•		•	•		
Air/Land Vertical Lift	•	•	•	•			•		•	•		
Forward Air Refueling Point/Hot Gas Operations											•	•
Cross-Country Dismounted Movements			•	•	•	•	•	•	•	•		•
Cross-Country Vehicle Movement		•	•	•	•	•	•	•	•	•		•
Vehicle Stream and Wetland Crossing		•	•	•	•	•	•	•				•
Blackout Driving			•	•			•					•
Emplacement of Obstacles			•		•	•	•	•	•	•		
Bivouacking/Assembly Areas			•		•	•	•	•	•	•	•	•
Communications and Surveillance Operations			•		•		•		•	•		•
Amphibious Operations		•	•	•	•	•	•	•	•	•		
Natural Resource Consumption			•	•	•	•	•	•	•	•	•	•
Overwater Hoist Operations	•	•	•			•	•		•	•		
Opposing Forces Vehicle Operations		•	•	•	•	•	•		•	•		•
Hardened Camp Site Use		•	•	•	•	•	•	•	•	•		•

PRESENTATION

Headquarters U.S. Air Force

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Eglin Gulf Regional Airspace Strategic Initiative (GRASI) – Landscape Initiative Environmental Impact Statement

Scoping Meeting

August 2013



Agenda

- Open House
- Public Meeting Begins
 - -Welcome and Introductions
 - -Air Force Briefing
 - -Public Comment Submittal

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Introductions

Eglin Air Force Base

Michael Spaits
96th Test Wing Public Affairs

Tom Tolbert
96th Test Wing Range Planning

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Overview

- Introductions
- Overview of the National Environmental Policy Act (NEPA)
- Purpose of the Scoping Process
- Proposed Action and Alternatives
- Environmental Issues to be Evaluated
- NEPA Process Schedule
- Public Comment
- Adjourn

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National Environmental Policy Act

What is NEPA?

The NEPA process is intended to help federal officials make decisions based on an understanding of environmental consequences

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National Environmental Policy Act

Why is an EIS needed?

 Ensures that environmental information is available to federal officials and citizens before decisions are made and actions are taken

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National Environmental Policy Act

NEPA Requires

- Consideration of environmental consequences of proposals under federal control and responsibility
- Consideration of reasonable alternatives
- Evaluation of potential impacts
- Public participation and comment
- A written Record of Decision (ROD)

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The Scoping Process

What is Scoping?

- An early and open process for determining the scope of issues to be addressed
- Requires the Air Force to notify affected governmental agencies, any affected Native American tribe, and the general public of the Air Force's intent to implement the NEPA process
- Ensures the Air Force invites potentially affected agencies/persons to review the Proposed Action and provide input regarding potentially significant issues

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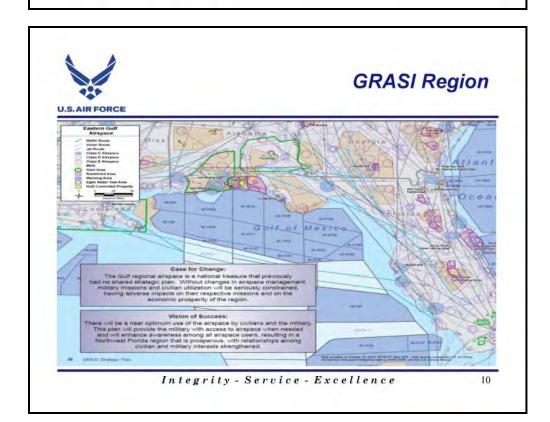
What is GRASI?

 The Gulf Regional Airspace Strategic Initiative (GRASI) is a collaborative effort to ensure near optimum use of airspace by civilians and the military

GRASI Objectives:

- Add high-altitude military airspace
- Improve air traffic management during busy periods
- Improve management facilities and communication
- Expand the military capacity of the region this is the focus of the GRASI Landscape Initiative
- http://grasi.leidoseemg.com

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What is the GRASI Landscape Initiative (GLI)?

 A strategy to partner with nongovernmental organizations, states, and federal agencies to acquire new working lands and partner with owners of existing working lands to investigate the potential for compatible military use

GLI Objectives:

- Address increased capacity throughout the GRASI region for:
 - Nonhazardous test and training activities (e.g., ground maneuvers, helicopter landing zones)
 - Hazardous training (e.g., air-to-ground live fire testing and training)
- Increased capacity for hazardous activities is in the initial planning stages and, if carried forward, would be addressed in separate NEPA documentation

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Proposed Action and Alternatives

What is the GLI Proposed Action addressed in this EIS?

- Establish and use radar emitter sites throughout Northwest Florida
- Conduct nonhazardous training activities in Blackwater River and Tate's Hell State Forests (BRSF & THSF)

Why is the Proposed Action Needed?

 To improve military training outcomes through better scheduling and reduce the competing demands on restricted areas in surrounding airspace

What are the GLI Alternatives addressed in this EIS?

- Alternatives identified during the scoping process
- No Action Alternative Proposed training activities would continue to occur on Eglin AFB; BRSF and THSF would not be utilized, and no new emitter sites would be established

What is the decision to be made?

Whether to implement the Proposed Action

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Proposed Action Details:

- Establish up to 12 radar, telemetry, and training emitter sites
 - Lands owned by Florida Forest Service (FFS), Florida Fish and Wildlife Conservation Commission (FWC), and Air Force
 - Typical radar and telemetry units would consist of Kineto Tracking Mount and Mobile Cinetheodolite Mount systems (shown below)





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Proposed Action and Alternatives

Emitter Site Criteria:

- 2.5- to 3-hour driving distance from Eglin AFB
- > 0.75 acre in size
- Accessible via improved roadways
- Adequate line of sight (e.g., not surrounded by tall trees or utility poles/wires)
- Conducive of utilities, communications, and security
- Clear of populated areas

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Proposed Action Details:

- At both BRSF and THSF
 - Utilize existing cleared areas and roadways for helicopter landing / drop zones and airstrips
 - Conduct nonhazardous training activities
 - Ground maneuvering
 - Aircraft operations
 - Amphibious operations
 - Use of the Short-Term Offender Program and Santa Rosa Youth Academy camp sites at BRSF
 - No live munitions / construction / off-road vehicles
- Activities would avoid protected species / habitat
- Coordination with the FFS for scheduling and public notification to avoid incompatible land use conflicts with public users.

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Proposed Action and Alternatives

Training Site Criteria:

- 1.5-hour drive/1-hour flight time from Eglin/Hurlburt Field
- Available roads and infrastructure for access
- Minimal to no improvements
- Available aircraft landing areas

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Environmental Issues to be Evaluated

- Airspace Management and Use
- Noise
- Safety
- Air Quality
- Soils/Erosion
- Water Resources
 - Wetlands
 - Floodplains
- Biological Resources
 - Vegetation, Sensitive Habitats, Invasive Species
 - Wildlife, Protected Species

- Cultural Resources
- Land Use
- Socioeconomics
 - Environmental Justice
 - Special Risks to Children
- Solid & Hazardous Materials/Waste
- Infrastructure
 - Utilities
 - Transportation

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Scoping Input Procedure

For those wishing to provide verbal comments

- Sign up on the Speaker's List at registration desk
 - Elected Officials will speak first
 - Agency and Organizational Representatives second
 - Private citizens in order of sign-up
 - Please limit comments to 3 minutes

For written comments

- Comment sheets are available at the comment table
- Turn in completed comment sheets at the end of the evening, or by mail or e-mail
- Visit http://grasieis.leidoseemg.com and provide comments online

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Public Comment Process

- All comments, verbal and written, will become part of the official administrative record
- Public Scoping Period ends September 12, 2013
- Input received by this date will be considered when developing the Draft EIS
- To receive a copy of the Draft EIS, please indicate your preference on the comment sheet or notify us by phone, mail, or e-mail
 - -Draft EIS copies will be distributed as CDs/DVDs
 - -CDs/DVDs will be available at local libraries

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EIS Contact Information

Direct written comments and questions to:

Eglin AFB Public Affairs ATTN: Michael Spaits 101 West D Avenue, Room 238 Eglin AFB, FL 32542-5499

PH: 850.882.2836 e-mail: mike.spaits@eglin.af.mil

OR

http://grasieis.leidoseemg.com

Comments should be postmarked by September 12, 2013

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ADDENDUM C SCOPING COMMENTS AND TRANSCRIPTS

SCOPING COMMENTS SUBMITTED VIA THE WEBSITE
WRITTEN SCOPING COMMENTS
TRANSCRIPTS (27 AUGUST 2013; 28 AUGUST 2013)

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SCOPING COMMENTS SUBMITTED VIA THE WEBSITE

Name	Organization	Comment
Alesa Tucker	Concerned Citizen	We have a very sensitive environmental eco system in this area that should by all means be taken only to protect and preserve this fragile system by whatever means necessary. There are other places they can train such as East of tates hell area or over towards Tindall Please take into consideration all the protected species and natural wildlife we have (The last Forgotten Coast) Thank you
Anita Grove	Apalachicola Bay Chamber of Commerce	August 29th, the US Air Force held a scoping meeting in Apalachicola about the Gulf Regional Airspace Strategic Initiative (GRASI) Landscape Initiative (GLI). The purpose of this initiative is to expand military training activities from Eglin and Tyndall Air Force Bases in to Tate's Hell State Forest and Apalachicola National Forest. We wholeheartedly support our military, however, the proposed training would be more intense than we have experienced in the past. Any increase in air traffic would negatively impact our tourism industry. Currently, we host tourists from around the world seeking to view the unique flora and fauna in Tate's Hell Forest. Tourism is a vital aspect of our economy and it is predicated on our pristine, quiet, wild natural areas. Apalachicola Bay and the surrounding lands have been preserved for decades to ensure the long term health of Apalachicola Bay and to conserve many rare and endangered habitats and species found within the fragile Tate's Hell environment. We have preserved these lands in lieu of receiving the economic benefits of development. This decade we are finally realizing the economic benefits of our preservation efforts. The Apalachicola Bay Chamber of Commerce and its 400+members oppose any increase in air traffic over the area and any training that would negatively impact the solitude and wildlife in the area. Please advise us on how to engage in further discussions on this issue. I can be reach at [private contact information redacted] Sincerely, Anita Grove Executive Director
Autumn McDonald		Please consider your training location elsewhere. The panhandle of Florida (as well as the Gulf Coast as a whole) is a major Migratory Route for migrating birds each Spring & Fall. It is a resting/fueling ground for birds both before and after they make their journey across the Gulf of Mexico. Also, some threatened species make their home here year-round (i.e., Red-cockaded Woodpecker) The Gopher Tortoise is already threatened in this area and any further encroachment would surely drive this species away. Please consider your No Action Alternative. Leave Blackwater & Tate's Hell State Forest for the wildlife and people who want to enjoy it.
Barbara Albrecht	BFA, PWA, Audubon, NPA, UWF	Gulf Regional Airspace Strategic Initiative – Public Input The Mission Statement for the Blackwater River State Forest is to "protect Florida and its people from the dangers of wildfire and manage the forest resources through a stewardship ethic to assure they are available for future generations". This was the mission for years, then in early 2013, the following was quietly added to the mission, "Cooperate with the United States military to facilitate mission essential training in a manner that does not adversely impact natural resources, forest management, or public access." The citizens of NW FL recognize that budget cuts have forced the Forest Service to become creative in funding their missions (timber management, recreation, and wildlife habitat) and managing the forest for multiple user groups. Countless user groups have volunteered hundreds of thousands of hours to assist and manage the forest for their organizations, because these lands were purchased for the public by the state and placed into preservation. Now, we are being told, informed without the opportunity to

Namo	Organization	Commant
Ivame	Organization	
Name	Organization	have a respectful dialogue, that military operations will close selected areas to the public. Unlike Eglin AFB, Hurlburt, or Tyndall AFB – the BWRSF lands are open areas with many in-holdings. That is private land owners. Eglin AFB has been planning mission expansions for their base operations for the past 10 years. Eglin should have been buying more land; adjacent land for these maneuvers, instead of giving land away for sewage spray fields, allowing subdivisions to encroach on their boundary, and permitting highways through their range. As a Nature Conservancy staff member for the Gulf Coastal Plain Ecosystem Partnership (GCPEP) for many years, we worked hard to openly discuss various missions with the Partnership who had enrolled their contiguous lands (totaling 1,050,000 Million acres) as wildlife corridors and habitat for the multitude of species that are year round residents, migrants, or transient in this last remaining sliver of habitat. Understanding each agencies charge, while working together to manage the landscape brought trust and success to this area through healthier uplands and aquatic systems. (http://www.nature.org/ourinitiatives/regions/northamerica/unitedstates/florid a/placesweprotect/blackwater-river-state-forest.xml) My biggest concerns with the GRASI project and I hope the EIS can address these concerns in a holistic manner, are the highly erodible sandy soils we have in this area and the proposed activities in and around the creek and river system. The Blackwater River system and watershed have been in peril for years (due to the logging industry in the 1800-1900's, which denuded the forest and caused heavy sedimentation in the riverine system, cattle which were allowed to roam and defecate in the creeks through the 1980s, ATVs and other trucks that mud bog and 'play' in the system still to this day). This system, once dominated by deep water, pools, riffles, and upwards of 45-55% woody material (trees) in the system which served to stabilize banks and provide a habitat for an importan
		logging in a riverine system recognized as an 'Outstanding FL Water' (which should protect it from any disturbance or impairment, water quality or habitat wise) and which also holds a second title 'Special Waters of the State'. The PUBLIC is disturbed by these rule changes, the lack of enforcement, and manner in which these continued assaults are impacting and jeopardizing the system. What makes this scenario worse is that scientists, ecologists, and biologists are
		sense. The Blackwater Watershed is divided into small segments, named HUC units, for the purposes of dividing the system into smaller components is to be able to better identify and delineate issues, like contaminants and water quality impairments. Every HUC Unit within the Blackwater River System is on the 303(d) list for water quality impairments; please let me remind you that Outstanding FL Waters are to be more protected than waters without special attributes. The Indian River, along Florida's East Coast was also identified as an Outstanding FL Water and has suffered from years of neglect, relaxing water quality standards, and eutrophication until now we are seeing and noting record level deaths of manatees and dolphins, as well as dwindling crab and

Name	Organization	Comment
	ga	fish populations. I participated in the Ten Year Review for the forest; this issue to
		use the land for military maneuvers was not brought up. I participated in the
		Blackwater River State Forest Liaison Meetings, and guess what? This was not
		brought up. Why Not? If these issues are not to be discussed with the public,
		then why bother with these meetings? The health of the river, the native
		species that use and depend on the system and all the ecosystem services that
		this system provides (large feeder for the East Bay System) depend on how the
		uplands and the transition zone are managed. There are numerous threatened
		and endangered aquatic species which have been studied and identified in this
		system. They include the following: • Four fish species (Blackmouth Shiner,
		Blacktip Shiner, Florida Chub, and the Gulf Sturgeon); • Five Amphibian Species
		(Pine Barrens Tree Frog, Dusky Gopher Frog, FL Bog Frog, Tiger Salamander and
		the Flat Woods Slamander); • Four species of reptiles (Eastern Indigo Snake,
		Gopher Tortoise, Alligator Snapping Turtle, and FL Pine Snake); • Eight aquatic
		insects (Blue Sand-river Mayfly, Dolania Mayfly, Diminutive Clubtail, Townes
		Clubtail, Peters' Little Sister Sedge, Zigzag Blackwater River Caddisfly, Say's
		Spiketail Dragonfly and Leuctra Stonefly); and • Ten Plants (Peidmont Jointgrass,
		Panhandle Lily, Hummingbird Flower, Chapman's Butterwort, Small-flowered
		Meadowbeauty, White-topped Pitcher Plant, Wherry's Sweet Pitcher Plant,
		Chaffseed, Chapman's Yellow-eyed Grass and Mountain Laurel) In addition, the
		diversity of aquatic insects identified in the Blackwater System include: • 33
		species of Dragonflies and Damselflies; • 42 species of Mayflies; • 21 species of
		Stoneflies; • 24 species of Caddisflies; • 3 species of Dobsonflies and Fishflies; •
		12 species of True Water Bugs; • 20 species of Beetles; and • 52 genera of
		Midges. Lastly, before we identify components of the GRASI Scoping Process
		which we would like to see addressed, the amount of money spent on 319 grants to address sedimentation issues, culverts, inadequate bridges built into
		the riparian zone, abandoned sand and gravel pits, and bank stabilization
		efforts may be undone by these proposed activities. The 319 grants received for
		the Blackwater are the tens of millions of dollars, and as stated earlier the Forest
		has worked hard and become very creative to stretch each dollar to accomplish
		their mission.
		http://water.epa.gov/polwaste/nps/success319/Section319III_FL.cfm#2 Please
		make no mistake, the Florida Forest Service, like the FL Dept of Environmental
		Protection and the FL Fish and Wildlife Conservation Commission are all
		governed by the Governor of the State of FL – who is a business man focused
		on developing business without regard for the cost of our environmental
		resources. Individuals working for these agencies essentially have their hands
		tied; or chance losing their job if they question or oppose the Governors
		Mission. That is what makes this covert military maneuver so disheartening. The
		GRASI Scoping Process feedback I hope you will address is as follows: • The tiny
		map on the un-numbered GRASI handout, page 4, entitled BRSF Tactical Areas –
		identifies hundreds of vehicle stream/wetland crossings. The VSWC is a large
		and heavy piece of equipment. How can you mitigate or restore the hydrologic
		impact that the use of these vehicles will cause in these low lying sensitive
		areas? • How many stream/wetland crossings exactly are there? Can I see a
		legible map of these areas, please? • What is the timeframe (years or months)
		that these activities will commence? • The map appears to have a majority of
		activity in the Hutton Unit? This area is very stressed due to anthropogenic
		activities and illegal dumping over the years. Our on-going monitoring of this
		area has shown a small amount of improvement since steps have been taken to
		alleviate stressors. The AFB activities may reverse this trend. • Several stream
		and wetland crossings are slated in the vicinity where restoration has occurred.

Name	Organization	Comment
rune		On-going monitoring had identified improvements in these areas, along the northern reaches of the forest. We are very concerned that your activities will impact these small steps in a negative manner. • The last page of the GRASI handout includes a table which identifies resource areas potentially affected by proposed action components. I am going to focus the next series of questions on this table: o Cross-country Vehicle Movement – Water Quality, sedimentation, woody material will all potentially be impacted. Water Quality via oil, brakes, etc. entering the system. Sedimentation as these big heavy equipment moves through the system. As log jams and snags are encountered, what will these maneuvers entail? Removal, bad for the system. Drive over, bad for the habitat (the holes that they make), what will be done? o Vehicle Stream and Wetland Crossings – impact hydrologic system. Heavy vehicles will create drainage ditches which alter the hydrology of the system and will potentially reroute water potentially causing future sedimentation in the system. We recognize that these disturbances coupled with our 65" of annual rainfall unwittingly create these issues. o Emplacement of Obstacles – will any of these obstacles be placed in a stream/creek/wetland system? Will they be removed? o What is the timeframe for these missions? Yearly, monthly, what type of duration? Please include me in the distribution list for any and all activities within the following watersheds: Perdido, Escambia/Conecuh, Blackwater, Yellow/Shoal, Choactawhatchee, and St. Andrew. Who am I? I am Barbara Albrecht, Watershed Coordinator for the University of West Florida, Center for Environmental Diagnostics and Remediation; President of the Bream Fishermen Association (the oldest citizen based water quality monitoring group in the state of FL and perhaps the US); Executive Director of the Panhandle Watershed Alliance; and, I also represent the Native Plant Society – Longleaf Chapter, and am the Conservation Chair for the Francis M. Weston Audubon
Ben Heyer	Common Citizen	Don't use the Blackwater Forest for troop training. I will be e-mailing US Senator Nelson to tell him not to endanger the environment for training troops.
Bennett Hoffman		I was going to make changes to this letter but it expresses exactly WHAT I WANT TO SAY! I am writing to express my concerns and opposition to the use of Tate's Hell State Forest for military training exercises by Eglin Air Force Base as proposed under the Gulf Regional Airspace Strategic Initiative (GRASI) Landscape Initiative (GLI). The original purpose for converting the Tate's Hell tract from county property to state-owned forest was CONSERVATION: (1) for hydrological protection and restoration of Apalachicola Bay, (2) to conserve many rare and endangered habitats and species of flora and fauna found within the fragile Tate's Hell State Forest environment, and (3) to preserve traditional and recreational uses of the land by the citizens whose tax monies were used for establishing this State Forest. The creation of Tate's Hell State Forest through the use of public funds was supported by Franklin County government and residents to protect and conserve the land for public and environmental benefits, and NOT for any usurping of those benefits by the military. There are serious consequences associated with the GRASI proposal and the following concerns must be considered. All plants, wetlands, water, insects, birds and wildlife will be severely impacted by the fuel exhaust of the low-flying (tree level) helicopters. That water flows into the already dying Apalachicola Bay. The

Name	Organization	Comment
		noise alone from these planes, helicopters and training exercises will devastate all birds and wildlife, as well as create untold problems for citizens living anywhere near that vicinity. The life cycles of nocturnally foraging animals will be disrupted by holding military training exercises primarily at night. The airspace used by private pilots to land at our local airports will be compromised by giving priority for the use of that same airspace to military aircraft. Any military radar emitters installed within Franklin County have the potential to disrupt civilian and private pilot communication devices and may even have health consequences for citizens who live nearby. Many of the residents of Franklin County depend on the bounty Tate's Hell State Forest provides through hunting and fishing to feed their families in this economically disadvantaged community. The unique ecology found within Tate's Hell State Forest such as the Dwarf Cypress Swamp and over 90 species of rare and endangered wildlife (such as the Red-Cockaded Woodpecker) are at risk of being damaged or destroyed by military training exercises and/or accidents that may occur during such military usage. Tate's Hell State Forest has one of the largest Black Bear populations in Florida, as well as a very large population of nesting American Bald Eagles. Tate's Hell is also part of the Great Florida Birding Trail and is visited by birdwatchers, photographers, nature lovers, hunters, fishermen, local residents and tourists from far away. Lastly, during the Scoping Meetings, the public was not even allowed to ask questions; any questions asked were ignored. For all of these reasons, I am resolutely opposed to the use of Tate's Hell State Forest for military training exercises. Sincerely, Bennett Hoffman
Beth Wright		Definition of Emitter - A device used to exude any signal, beacon, light, odor, liquid, fragrance, ionizing particles or any other type of signal. So, pretty much this is going to be another HAARP location going up in the middle of one of the most protected wildlife areas along the Gulf Coast? You want to build a military compound in the middle of one of the Most Protected Wildlife Areas Along the Gulf Coast? And you're trying to tell people who live in this area, who own land and homes in this area (because it's one of the most Protected Wildlife Areas Along the Gulf Coast), you want to tell us that what you propose will have no effect on this Protected Wildlife Area and the peaceful coexistence the people in this area have nurtured and sacrificed for in order KEEP this a Protected Wildlife Area. You know that you will do harm, you always do. The areas around any military installation become overcrowded and the infrastructure is always damaged and altered in the extreme. You will kill and destroy everything that is wonderful about Franklin County and the surrounding areas, and you know it. You. Know. It. So, please don't. It is a sad fact that the rain forests in South America are being mowed down for profit. Our United States Wildlife Areas are PROTECTED for very good reasons. They are protected from people who would harm or destroy them for profit. Who profits from this destruction in Tate's Hell? This presidential term will end in 2016. The damage done will linger far beyond that time. Don't let this project be another that will bring great harm and then be abandoned when the next election comes around. The damage will already be done. This is The United States of America, we are American Citizens and we do not want this. Thank you, Beth Wright
Bill Chambers		I am writing to express my concerns and opposition to the use of Tate's Hell State Forest for military training exercises by Eglin Air Force Base as proposed under the Gulf Regional Airspace Strategic Initiative (GRASI) Landscape Initiative (GLI). The original purpose for converting the Tate's Hell tract from county property to state-owned forest was CONSERVATION: (1) for hydrological

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Brandon Rincon		This letter is a notice of concern for the Eglin Air Force Base takeover of Black Water State forest. Black water plays a key role in ensuring the protection and recovery of imperiled species and the ecosystems upon which they depend (Endangered Species Act, 16 U.S.C §1531 et seq. (1973), It provides public access with multiple recreational opportunities, it provides a safety net and a green way for species to make natural migrations, and it is a permanent fixture on the Florida land scape that symbolizes America's best idea, our state and national parks. Due to the inadequate mission scheduling and oversight of Eglin's test ranges, our public lands are at risk of being encroached upon with military range expansion proposals. Projects like these will jeopardize public access due to mission closures, and will be in direct violation of the endangered species act. I am also concerned that long-term use of these properties will include additional environmental and public use impacts not limited to those included in the Current Environmental Impact Statement that is being developed. It is still possible to provide national security to our nation without the destruction of state lands. It is an ethical imperative not to allow Eglin Air

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		Force Base takeover Black Water state forest.
Brenda Callaway	Concerned Citizen	After reading your documents concerning GRASI, I have to admit I am very concerned for the continued health of these natural areas. Too much wonderful work has been done to protect and facilitate the recovery of endangered species and habitat to now throw caution to the wind and allow troop activities in these protected areas. You say you will not be training in the areas where protected species live. Yes you will, you will be in their forest! You will be forging, with vehicles no less, Florida's only remaining pristine river! I am also concerned for the emotional health of the people who leave their stress-filled lives behind to seek solace in the forest. How will these maneuvers affect public access? How will they affect the public's enjoyment in the areas left available to us? We often hike these woods and I frankly do not want to be greeted by concertina wire, or maneuver noises on my strolls. I realize we need the military primed and ready to protect our freedoms, but this is not the place for such activities. Surely somewhere on your nearly half a million acres there is some place more appropriate. Others will speak much more eloquently than I can, but please, leave our natural areas alone. We have too few places where we can get away from the realities of life, Blackwater and Tate's Hell are two places where souls can be restored. Thank you.
BrendaLee Lennick	Concerned	I am writing to express my concerns and opposition to the use of Tate's Hell State Forest for military training exercises by Eglin Air Force Base as proposed under the Gulf Regional Airspace Strategic Initiative (GRASI) Landscape Initiative (GLI). The original purpose for converting the Tate's Hell tract from county property to state-owned forest was CONSERVATION: (1) for hydrological protection and restoration of Apalachicola Bay, (2) to conserve many rare and endangered habitats and species of flora and fauna found within the fragile Tate's Hell State Forest environment, and (3) to preserve traditional and recreational uses of the land by the citizens whose tax monies were used for establishing this State Forest. The creation of Tate's Hell State Forest through the use of public funds was supported by Franklin County government and residents to protect and conserve the land for public and environmental benefits, and NOT for any usurping of those benefits by the military. There are serious consequences associated with the GRASI proposal and the following concerns must be considered. All plants, wetlands, water, insects, birds and wildlife will be severely impacted by the fuel exhaust of the low-flying (tree level) helicopters. That water flows into the already dying Apalachicola Bay. The noise alone from these planes, helicopters and training exercises will devastate all birds and wildlife, as well as create untold problems for citizens living anywhere near that vicinity. The life cycles of nocturnally foraging animals will be disrupted by holding military training exercises primarily at night. The airspace used by private pilots to land at our local airports will be compromised by giving priority for the use of that same airspace to military aircraft. Any military radar emitters installed within Franklin County have the potential to disrupt civilian and private pilot communication devices and may even have health consequences for citizens who live nearby. Many of the residents of Franklin County depend on the

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Brian Goebel	Florida Native Plant Society	Tate's Hell State Forest (Liberty & Franklin Counties, and bordering the Gulf/Apalachicola Bay) and Blackwater River State Forest (Santa Rosa & Okaloosa Counties) proposed to be used for "robust" military air and land training!?! I believe the Air Force has more than enough training grounds already in existence! Destroying State Forest Land under the guise of Defensive training is a complete slap in the face to the environment and the citizens of Florida! I am totally against giving up any protected lands, State Parks or environmentally sensitive land period!
Bridget DeArman		I am opposed to the military's use of BRSF. It will have very negative affects on its longleaf pine ecosystem and the many endangered plant, bird and animal species that are found there including the Florida black bear, Red-cockaded woodpecker and the gopher tortoise. It will also negatively affect waterways flowing through the forest such as the Blackwater River, Juniper Creek, Coldwater Creek and Sweetwater Creek.
Carole Tebay		I write as a person who craves the freedom and beauty of wild places such as the Blackwater River State Forest. Beyond my personal needs, the very things that make Florida a wonderful place to live and visit are under great strain from shortsighted development and human activity. Without an aggressive effort, Florida will cease to be the very thing that makes it such a special place. We have an obligation to future generations to be responsible stewards. I know the needs of our military and the Forest Service are important, with that in mind, I am chagrined to voice my concerns on the GRASI Landscape Initiative. But, since the public was not given a chance to address questions to the panel about the Initiative during the recent presentation in Milton, FL I am left to speculate. I am concerned about the impact on the public's use of the Blackwater River State Forest during ground maneuvers and amphibious operations. And, I am concerned about the noise created by a "near optimum use of airspace." We were given no idea how often GRASI activities would take place or if noise from aircraft would become the new normal. The Forest is a busy place. Many hunting activities have time and date restrictions. But, many forms of recreation, such as wilderness camping, horseback riding, hiking, hog hunting and paddling may take place without notice to the Forest Service. I question the ability of those involved with the Initiative to be aware of the public's use of the Forest and plan accordingly without placing restrictions on the use of the Forest. This is a public forest, I don't believe practicing for war there is compatible. A memory I cherish is arriving in the Forest before sunrise in an area where the red cockaded woodpeckers nest. As we stood in the dark I heard the blue jays awaken, then the cardinals. Just as the sun began to rise we heard the woodpeckers calling to each other and were able to see them emerge from their nests, repair their enemy repelling pine sap traps, and then, one-by-one, fly off in different d

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		experience, what affect will GRASI have on eco-tourism. Another morning I walked through a park-like savanna of longleaf and gasped at the beauty I beheld as I came upon one of the Forest's pitcher plant bogs. But, there is a stream running through that breathtaking bog. Is it one of the countless dots on your map showing amphibious operations? Early mornings I have put my kayak into the water to enjoy the burbling creek sounds as I glided along. Will the quiet be broken by an amphibious operation or the "near optimum use of airspace?" Will I even have the freedom to make these impulsive forays into the Forest? How will GRASI operations affect the burn program schedules in the Forest? The weather, seasons, hunting schedules, and breeding periods must now be considered. Burning is crucial to maintaining the health of the forest and safety of the residents, will military operations now take presidence over forest management? I hope that you will carefully consider my questions and I wish that I could hear your answers. Respectfully,
Carolyn D. Rosier		I am very much opposed to the use of the Tate's Hell areas of Franklin and Liberty counties as a training area for the AF. This is one of the last great natural areas of Florida and is widely renowned for recreation and wildlife. We have a 70 year old family camp deep in the woods there and do not want to see, hear jets in the skies above us. We treasure our way of life here in the less populated regions of Florida. The preserve is there for a reason, please keep your training in the areas you already have available. Thank you, Carolyn D. Rosier
Carolyn Davis Bellah		Please reconsider turning Tate's Hell into a training site. This land is a fragile ecosystem which does well to support a few bear, whitetails, razorbacks, squirrels, birds, alligators, several species of snakes, and a few people. The people are mostly poor and use subsistence hunting and fishing to help feed their families. My extended family has owned property in the vicinity for 70 years. We gather there in mass several times each year with several of the kinfolk who live nearer using the property often. We have lots of children (with more coming every year) who could be endangered by unexploded munitions, etc. Please reconsider and do not degrade our forests and river through inappropriate use!
Charles Elliott		As a retired veteran I am more than supportive of this proposed operation. I personally was involved with activities on all branches of the military bases throughout the country and there is no more detailed, dedicated, professional group of managers overwatching the natural environment. Come use the forest, you will make a positive impact by opening up areas for the wildlife to use and the men and women using the are will also contribute to our economy.
Charles Lee, Director of Advocacy	Audubon Florida	Audubon Florida, the state's oldest and largest conservation organization, founded in 1900, provides the following comments on the U.S. Air Force proposal to utilize Blackwater River State Forest and Tate's Hell State Forest for military training exercises as described in the scoping documents. Audubon Florida and its local chapters have invested considerable time, effort and funds in collaboration with the managers of both of these state forests to advance important ecological management efforts designed to improve habitat for important species, including but not limited to listed species such as the Redcockaded Woodpecker. Audubon is knowledgeable about, and very appreciative of United States Air Force efforts toward land and wildlife conservation, which have been evident on such tracts as Avon Park Bombing Range, Tyndall Air Force Base and Eglin Air Force Base in Florida. We know that under proper circumstances, and with adequate planning and careful management, some types of military exercise uses may be compatible with

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		land and wildlife conservation. With that in mind, we have examined the uses at Blackwater River State Forest, and Tate's Hell State Forest proposed in the GRASI initiative. Our review has convinced us that elements of the current proposals of the U.S. Air Force for military exercises in these two state forest units are far reaching, expansive, and overly intrusive in the natural environment of both state forests. We have the following comments specifically addressing the scoping of the EIS: (1) Alternatives should be developed in the EIS process to exclude significant sensitive portions of both Blackwater and Tate's Hell State Forests from the impact of most of the proposed activities, including operations involving vehicles, aircraft, and training munitions, noise generating expendables and pyrotechnic devices. The exclusion areas should be based upon detailed, ground-truthed mapping of habitats for rare and listed species, and high quality natural communities. In general, operations and constructed facilities need to be excluded from such areas, with adequate buffer zones. (2) Monitoring and control of these operations, even if limited as indicated in the suggested alternatives below, should involve credentialed third-party observers with the power to intervene with commanders in the field to curtail or alter operations on a real-time basis to protect fragile resources. (3) Alternatives should also incorporate the following limitations on military training exercises: (a) The operations of wheeled or tracked military vehicles in wetlands of any kind should be prohibited. Vehicle operations of all kinds should be limited to existing roads, and then be outside of designated exclusion areas as indicated in (1) above. (b) The construction of airstrips or improvement of existing airstrips for fixed-wing aircraft use should be limited to existing cleared areas and previously disturbed sites. (d) Installation of Emitter Sites should be limited to existing cleared areas and previously disturbed sites. (d) Installatio
Cheryl Ann Griffin		Thanks for allowing us to comment and be added to the meeting minutes- with short notice, was unable to attend. We wish to thanks all our Military personnel for their service and dedication. We fly our flag, wear a yellow ribbon, daily. Our community is very patriotic Apalachicola has the Vietnam Three Soldiers

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		Monument, Carrabelle has Veterans' Park and WW II Camp Gordon Johnston Museum with many activities supporting our troops. We are not against military – just against using our very fragile and precious Tate's Hell State Forest or the Blackwater State Forest for "war games". Both of these are the two largest state forests in Florida- with Blackwater being the oldest. We need to protect them There has been lots of "why not to" and you have heard most – I'm probably repeating what you've already heard but want to be another voice of NO!! As you are aware, our area is in dire straits with our Bay – and the famous seafood industries. We are trying to "Save our river, Save our bay" we are one of the last pristine estuaries left in the USA and it needs protecting – not only for now but for the future generations of our area and economics. Tates Hell is a very delicate, intricate system, with complex ecological issues already that are beginning to be addressed. Being a hydro biological area it is very important filtering system for the Apalachicola River Basin, and the nursery for most creatures of the Gulf of Mexico. Being an avid birder and environmentalist, this area needs our protection. We live in a major migratory flyway for not only our avian friends but also butterflies, dragonflies, and have many indigenous plants, trees, snakes, gopher tortoise, and others that need our protection. Let alone if in fact the ivory-billed woodpecker could still exist. (Blackwater area) Franklin County supports more than 60 documented Bald Eagle nests, amongst other nesting critters, avian or ground huggers, such as black bears, possible Fl puma, etc. I know you will not "intentionally" endanger any of the above – but, just your presence will have an effect – let alone any hide'n seek games, or God forbid, an accident. We already have restricted air space above us for military use. This whole idea/request seems to have political overtones – definitely don't trust that!!! You are purchasing additional land around Egli
Chris Beatty		*** I am writing to express my concerns and opposition to the use of Tate's Hell State Forest for military training exercises by Eglin Air Force Base as proposed under the Gulf Regional Airspace Strategic Initiative (GRASI) Landscape Initiative (GLI). The original purpose for converting the Tate's Hell tract from county property to state-owned forest was CONSERVATION: (1) for hydrological protection and restoration of Apalachicola Bay, (2) to conserve many rare and endangered habitats and species of flora and fauna found within the fragile Tate's Hell State Forest environment, and (3) to preserve traditional and recreational uses of the land by the citizens whose tax monies were used for establishing this State Forest. The creation of Tate's Hell State Forest through the use of public funds was supported by Franklin County government and residents to protect and conserve the land for public and environmental benefits, and NOT for any usurping of those benefits by the military. There are serious consequences associated with the GRASI proposal and the following concerns must be considered. All plants, wetlands, water, insects, birds and wildlife will be severely impacted by the fuel exhaust of the low-flying (tree

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Dale Cook	Concerned	I am writing to express my concerns and opposition to the use of Tate's Hell State Forest for military training exercises by Eglin Air Force Base as proposed under the Gulf Regional Airspace Strategic Initiative (GRASI) Landscape Initiative (GLI). The original purpose for converting the Tate's Hell tract from county property to state-owned forest was CONSERVATION: (1) for hydrological protection and restoration of Apalachicola Bay, (2) to conserve many rare and endangered habitats and species of flora and fauna found within the fragile Tate's Hell State Forest environment, and (3) to preserve traditional and recreational uses of the land by the citizens whose tax monies were used for establishing this State Forest. The creation of Tate's Hell State Forest through the use of public funds was supported by Franklin County government and residents to protect and conserve the land for public and environmental benefits, and NOT for any usurping of those benefits by the military. There are serious consequences associated with the GRASI proposal and the following concerns must be considered. All plants, wetlands, water, insects, birds and wildlife will be severely impacted by the fuel exhaust of the low-flying (tree level) helicopters. That water flows into the already dying Apalachicola Bay. The noise alone from these planes, helicopters and training exercises will devastate all birds and wildlife, as well as create untold problems for citizens living anywhere near that vicinity. The life cycles of nocturnally foraging animals will be disrupted by holding military training exercises primarily at night. The airspace used by private pilots to land at our local airports will be compromised by giving priority for the use of that same airspace to military aircraft. Any military radar emitters installed within Franklin County have the potential to disrupt civilian and private pilot communication devices and may even have health consequences for citizens who live nearby. Many of the residents of Franklin County depend on the

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Daniel Stangeland		This is concerning the Blackwater State Park in Santa Rosa county. I am a citizen of the local community and frequent this park quite often. I go there for several reasons: wildlife, scenery, creeks and,most of all, peace and quiet. I completely opposed the idea of our military taking this away from me. This land was purchased by the state with my hard earned tax dollars to be used by the people of the state.
Darline Larson	Private Citizen	No, no, no, stay out of Blackwater River State Forest. This is a place to take my grandchildren and I hope they can take their children, grandchildren one day. And for that to happen the military needs to stay away. The more activity in that forest the more potential for damage. I do not want to see any military vehicles in BRSF. They have poor fuel efficiency and there will be fuel trucks out there and spillages will happen. I am military, born, raised, served and still work civil service but this is wrong, wrong, wrong.
Dean K. Jue	Private Citizen	I am concerned about this proposal because of its generality, the lack of any areas or habitats being declared off-limits to training exercises, and the lack of any forum for public input into the training exercises if this proposal is approved. Consequently, I am strongly opposed to this proposal in its current form despite my understanding for the need for such training exercises somewhere. Blackwater River State Forest (BRSF) has many species of rare plants and animals, some of which are federally-listed and some of which are found nowhere else in Florida except the BRSF. Many of them are associated with pitcher plant bogs and wetlands. These bogs and wetlands are very easily impacted and human footprints through such areas can be evident for months from just a single day's visit. The impact of a single training event with amphibious vehicles through such areas would impact the wetland or bogs for years!! Tates Hell State Forest (THSF) has fewer documented records of federally-listed or rare species but they do occur there as well. Like the BRSF, it too has wetlands and bogs that are equally sensitive as those in BRSF. Both state forests are used by hunters, fishermen, campers, hikers, and nature enthusiasts for their recreational activities. They often have very specific locations within those state forests to which they travel. These users must all be kept informed with the latest information about the dates of any proposed training activities within the two state forests so that they can find alternative recreational sites if necessary. As a minimum level of modifications to the Draft EIS to make it approach acceptability to me, I propose the following modifications to the proposal: 1) working in conjunction with designated representatives of all the various recreational groups of the two state forests, state agency biologists, and the

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		state natural heritage program (the Florida Natural Areas Inventory), identify the geographic areas of the two state forests that will always be excluded from these training exercises because of their environmental sensitivity, historical value, or importance to recreational users of the forest. 2) unless there is a declaration of a national emergency, put a limit on the number of times such training exercises will occur on these state forests. A reasonable number may be once per month. 3) unless there is a declaration of a national emergency, require Eglin Air Force Base to notify all Florida Panhandle media such as newspapers and radio stations as well as through a regularly-maintained Eglin Air Force Base website of the location of such activities two weeks prior to their anticipated use. As part of this notification process, a mechanism must be developed for public feedback on the proposed usage and those public concerns must be publicly-addressed by Eglin on their website prior to the training event and the possible consequences of such public input may results in modifications to the training event up to canceling the training at the original proposed site. 4) There must be some responsibility explicitly stated about the consequences of violations of the agreed-upon usage should it occur (e.g., inadvertent destruction of a sensitive wetland). Restoration, fines, and up to removal of an area from any future training activities should be some of the possible consequences. 5) There needs to be an explicit statement about the duration of this proposal (e.g., 5 years with an option to renew and amend). It should not be in perpetuity.
Deborah Roberts	None	I am writing to express my concerns and opposition to the use of Tate's Hell State Forest for military training exercises by Eglin Air Force Base as proposed under the Gulf Regional Airspace Strategic Initiative (GRASI) Landscape Initiative (GLI). The original purpose for converting the Tate's Hell tract from county property to state-owned forest was CONSERVATION: (1) for hydrological protection and restoration of Apalachicola Bay, (2) to conserve many rare and endangered habitats and species of flora and fauna found within the fragile Tate's Hell State Forest environment, and (3) to preserve traditional and recreational uses of the land by the citizens whose tax monies were used for establishing this State Forest. The creation of Tate's Hell State Forest through the use of public funds was supported by Franklin County government and residents to protect and conserve the land for public and environmental benefits, and NOT for any usurping of those benefits by the military. There are serious consequences associated with the GRASI proposal and the following concerns must be considered. All plants, wetlands, water, insects, birds and wildlife will be severely impacted by the fuel exhaust of the low-flying (tree level) helicopters. That water flows into the already dying Apalachicola Bay. The noise alone from these planes, helicopters and training exercises will devastate all birds and wildlife, as well as create untold problems for citizens living anywhere near that vicinity. The life cycles of nocturnally foraging animals will be disrupted by holding military training exercises primarily at night. The airspace used by private pilots to land at our local airports will be compromised by giving priority for the use of that same airspace to military aircraft. Any military radar emitters installed within Franklin County have the potential to disrupt civilian and private pilots communication devices and may even have health consequences for citizens who live nearby. Many of the residents of Franklin County depend on th

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Debra Taylor		Regarding Tate's Hell State Forest: I am writing to express my concerns and opposition to the use of Tate's Hell State Forest for military training exercises by Eglin Air Force Base as proposed under the Gulf Regional Airspace Strategic Initiative (GRASI) Landscape Initiative (GLI). The original purpose for converting the Tate's Hell tract from county property to state-owned forest was CONSERVATION: (1) for hydrological protection and restoration of Apalachicola Bay, (2) to conserve many rare and endangered habitats and species of flora and fauna found within the fragile Tate's Hell State Forest environment, and (3) to preserve traditional and recreational uses of the land by the citizens whose tax monies were used for establishing this State Forest. The creation of Tate's Hell State Forest through the use of public funds was supported by Franklin County government and residents to protect and conserve the land for public and environmental benefits, and NOT for any usurping of those benefits by the military. There are serious consequences associated with the GRASI proposal and the following concerns must be considered. All plants, wetlands, water, insects, birds and wildlife will be severely impacted by the fuel exhaust of the low-flying (tree level) helicopters. That water flows into the already dying Apalachicola Bay. The noise alone from these planes, helicopters and training exercises will devastate all birds and wildlife, as well as create untold problems for citizens living anywhere near that vicinity. The life cycles of nocturnally foraging animals will be disrupted by holding military training exercises primarily at night. The airspace used by private pilots to land at our local airports will be compromised by giving priority for the use of that same airspace to military aircraft. Any military radar emitters installed within Franklin County have the potential to disrupt civilian and private pilot communication devices and may even have health consequences for citizens who live nearby. Many of the reside

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Delores R. Hardin		My property adjoins Tate's Hell State Forrest and I am asking you please do not do your military training exercises here. It has taken the state a long time and a lot of money to restore the area in order to restore and protect our watershed and the habitat for bears, wolves, etc. Our county was used and abused by the military for World War II training and there is still junk all over that they left behind. Also, our water quality is of utmost importance for the oysters and scallops in our bay. It is already suffering due to lack of fresh water in the Apalachicola River. I beg you please don't do this.
Denise Butler	Personal	I am opposed to the plans for the Air Force to use Tate's Hell. Our area has been negatively affected by our water issues and that is impact enough on our fragile environment and on our economy which depends on our natural-ness. This is a terrible idea and the residents and taxpayers of Franklin County were not notified until it appears this is a "done deal".
Don Stillwaugh		I strongly oppose use of public lands such as BRSF and Tate's Hell for military training operations. These natural areas are fragile enough without the diverse impacts of various military exercises. Please reconsider these proposals immediately!
Doug Carter	Individual - St George Island	This note is directed at both emitter sites and training activities in Tates Hell Forest. 11 September 2013 Comments on Eglin AFB Proposed Grasi Initiative After reading and listening to the presentation on the GRASI Initiative I must admit I am more than confused about the scope of the proposal the AFB is making and therefore have to oppose much of it until such time as more information can be proposed. My opposition is based on the impact this will have in a number of areas including but not limited to the following: 1) No alternatives have been proposed so that the public can weigh in and help the military find alternatives. This is both partially driven by the vagueness of the proposal itself especially with respect to the activities that will take place but also due to the targeted nature of this proposal. That is this proposal is specifically targeted at the use of publicly protected areas because of their remote nature and the desirability with regards to the purposes that have been stated. The later issue is of concern as these areas were specifically paid for by the taxpayer to protect lands and ecosystems and this intent is clear when reading the Florida Forest Service Web site from which I have extracted some information below. The last sentence (in parantheses) that clearly states what the primary purpose of the Forest Service is and how this fits into that. "The natural resources found on Tate's Hell State Forest are very diverse due to the unique and various natural community types. At one time Tate's Hell State Forest supported at least 12 major community types which included: wef latwoods, wet prairie, seepage slope, baygall, floodplain forest, floodplain swamp, basin swamp, upland hardwood forest, sandhill, pine ridges, dense titi thickets and scrub. Currently, the forest contains approximately 107,300 acres of hydric communities such as wet prairie (contains a vast diversity of plant species), wet flatwoods, strand swamp, bottomland forest, baygall, and floodplain swamp. Past management practi

Name	Organization	Comment
Hame	Organización	this plan forward under the umbrella of the need to aid training for our troops
		that will be deployed overseas does not help eliminate this concern. 3) The
		social and economic effects are not clearly stated in any fashion. Vague
		references to potential jobs have been made but there is no clear definition of
		how or even why these proposed "limited actions" would generate any jobs
		other than perhaps service in a convenience store. And given that no details on
		the scope duration or even planned events have been given (other than a
		listing) one can only infer that all the social and economic effects will be
		negative. That is lower quality of life for persons living in this region as
		helicopter come in and out or fixed wing aircraft approach a "KTM or MTE" or
		negative economic impact because this once pristine area is now being fouled
		by the constant noise of an army on the move. This is not acceptable to anyone
		and just because the population base is not large enough to make as large of a
		complaint does not mean it is acceptable here. 4) Environmental
		Consequences: The impact that these proposed actions could have on the local
		area are so widespread that I am shocked that anyone would seriously even
1		consider this initiative, especially as it relates to any action on the ground.
		Vectoring to various emitters if limited to high altitude and limited in terms of time of day and to fixed wing aircraft does likely not have a large environmental
1		impact (although I am not sure what is being used to run this equipment and
		how likely it can easily be placed in remote sites without a negative impact) but
		any forces at or near the ground in these remote pristine areas is nothing but
		bad news. To consider this seriously when the water that flows from Tates Hell
		forest is going into what is considered one of the most pristine estuaries on the
		east coast is at best irresponsible. It is beyond ludicrous to think that this
		proposal is coming at a time when the State of Florida is asking the Supreme
		Court of the United States to protect the Apalachicola Bay by limiting the fresh
		water use some 200-300 miles upstream. Yet at the same time we are supposed
		to believe that landing men and helicopters in and around this same bay will
		have no negative impact when this is less than 20 miles upstream. Please consider your logic here. Assurances from the military that all will be well are
		promises that cannot be kept as there are things that we cannot control. It will
		only take one mistake on refueling, one mistake on bringing in non-native
		species, one mistake of a crash to have an impact that could change the
		dynamics dramatically on this bay. Finally please also consider the scope of
		what is being protected here. Tates Hell Forest was put in the public trust to
		protect these ecosystems and is home to several endangered species (now
		making a comeback). The ecosystem here is not too different from the
1		Okefenokee Swamp in South Georgia which has now been declared a National
1		Landmark and those who put it in the public trust and protected it from use
1		years ago are now considered to have great foresight. But what if instead this
1		swamp had been used differently. Tates Hell today is about half the size of the Okefenokee but will I believe one day soon viewed in the same way. An area for
		careful public recreation but an area we need to work to preserve not to use for
1		commercial or military activities on any large scale. (Again this is the primary
1		objective of the State's Forest Service). 5) Potential Human Health
1		Consequences. This is probably frankly the least concerning other than from a
1		stress standpoint. The stress will come from overflights, and concern about the
		bay and the livelihood that all depend on in this area. None of this is directly
1		measureable but it will be there nonetheless. In short unless enormous detail is
1		provided this proposal should be rejected out of hand as it violates a sacred
		covenant between the State of Florida and its People. Protecting the
		ecosystems of Tates Hell Forest ultimately protects the ecosystems of the
		Apalachicola Bay. The State has invested a lot to protect both and this should

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		be honored. Not just because it is the right thing to do and a promise was made to the citizens of Florida when land was purchased but also because this is what preservation is all about. As the military considers closing down bases and retiring old areas perhaps this is where it should focus in terms of training rather than extending its reach into "one of pristine estuaries on the east coast". Just as the military is trying to protect and defend the people of the United States so are people of this area trying to protect the natural ecosystem so that future generations will be able to enjoy it as well. Respectfully submitted, Doug Carter, [private contact information redacted]
Dylan Brown	Retired Marine	As a former service member I cannot see how using a state park for exercises is key to mission success. In the Marine Corp we have worked with what we were given to work with and made due. Encroaching and invading the places our loved ones visit to enjoy nature for the sake and excuse of mission readiness is shameful. Cpl Dylan Brown USMC Retired
Edward Reid		Blackwater River State Forest is a natural treasure. It does not need disruption from military training activities. The US has more military bases than are needed, but great resistance to closing any. The military (not just the AF) needs to figure out how to utilize already-allocated land better, rather than encroaching on public land. Florida already gave up 400,000 acres of National Forest land 75 years ago to create Eglin AFB. Stop asking for more.
Edward Reid		Tate's Hell State Forest is a natural treasure. It does not need disruption from military training activities. The US has more military bases than are needed, but great resistance to closing any. The military (not just the AF) needs to figure out how to utilize already-allocated land better, rather than encroaching on public land. Florida already gave up 400,000 acres of National Forest land 75 years ago to create Eglin AFB. Stop asking for more.
Elaine Rosenthal		Regarding creating landing strips and a radar site in Tates Hell State Forest, Franklin County, FL: I protest. Tate's Hell is currently a well preserved wildlife area hosting many plant and animal species rarely found elsewhere.
Elizabeth Markovich		I am concerned that all measures be taken to prevent environ entail damage to this area
Ellen Copeland	Personal	I am a Florida native and am totally opposed to the use of any more of the lands for military training in the panhandle area. This is a native habitat for many endangered species. I love driving from the coast returning home through the very areas these plans are considering. It is a State forest and is to perserve these animals and for all of us to enjoy, not for military training. Please seek other alternatives and leave these areas alone.
Gary Shannon	None	Please do not ruin this eco-system. There are miles of area near the Air Force base along 98 that you can surely use for this project. Why damage Tate's Hell with a project like this? Just where do you think all the snakes and critters will go when you start bulldozing this area. I'm really sure it will cause a major problem in Carrabelle, Eastpoint, and the surrounding area. Just please leave Tate's Hell the way it is, quiet and beautiful, a National Treasure. Thanks for your time Gary and Donna Shannon
Gathana Parmenas		I wish to voice my opposition to the use of Tate's Hell State Forest for Air Force training. The proposal shows three airstrips, more than in Blackwater, despite the notation that THSF is the less important training area. THSF map shows one airstrip which is not near any roads, despite assurances that no clearing will be

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		done. Additionally, the note that 3/4 of an acre is the minimum cleared area for other uses does not put a maximum limit, nor discuss the ongoing maintenance which would be needed to keep trees out of the areas. All activities involving helicopters, radar, clearing, etc., have the potential to be highly disruptive to the plant and animal life, including 90 plus endangered species. Please include humans among these species, since the population of Franklin County is under severe economic pressure and many depend on the THSF for food to survive. Recent economic development studies all show the THSF as a vital component for future tourist development. Nature tours, including tours for wildflowers, butterflies and rare native plant species, will all be impaired by the environmental impacts of the training. Likewise, hunting and fishing must remain unimpaired, and hopefully improved, for the future of our county. As a resident of Franklin County, I enjoy taking visitors camping in the forest during non-hunting season. I object to the idea that the training exercises will be at night and scheduled to avoid hunting season. I cannot imagine visitors (or myself) wanting to return after hearing helicopters overhead, or encountering middle of the night exercises. When THSF was created, it was promised to be restored to natural conditions and great effort has gone into beginning that process, including removing roads and restoring the hydrologic flow, so vital for the health of the Apalachicola River and the Gulf of Mexico as a whole. The promise of a nature preserve to the north of Carrabelle played a large part in my decision to move there in the 1990s. What is now being proposed is a betrayal of that promise. The Air Force has many options nationally for areas to use as training grounds. The residents of Franklin County do not have other options. Please abandon your plans to use Tate's Hell State Forest for expanded Air Force training exercises.
George Sibley		Here we go again — no sooner do Florida's citizens get land promised for conservation and water protection then some fool comes up with a plan to use it for something else. Natural Florida is going down the tubes everywhere, but natural areas are essential for many basic processes we all need to live. Conservation and habitat for our dwindling wildlife are important in themselves. They should not be just what we do with land for which we haven't come up with some other use. Local residents and Franklin County's Board of Commissioners have already reminded us and you that Tate's Hell State Forest was created with public money to protect and conserve the land for public benefits, yet public participation was not allowed at your Scoping Meeting. A project like this should not go forward behind closed doors. This is public land, and the public has a right to decide what it should be used for. Actually, we already did.
Greg Pixley		I disagree with any/all activities that will further restrict or limit Blackwater 's land and airspace use from general aviation. The recreational airfield at Munson provides a rare capability for general aviation pilots to enjoy state parks. State parks should not be used to expand federal training options.
Helen Bell		Blackwater River State Forest is a natural treasure. It does not need disruption from military training activities. The USA has more military bases than are needed, but resist closing any. The military needs to figure out how to utilize already-allocated land better, rather than encroaching on public land. Florida already gave up 400,000 acres of National Forest land 75 years ago to create Eglin AFB. That is a great deal of public-access land that has already been restricted by the military. It is not acceptable to isolate even more land from the public.

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Helen Bell		Tate's Hell State Forest is a natural treasure. It does not need disruption from military training activities. The USA has more military bases than are needed, but resist closing any. The military needs to figure out how to utilize already-allocated land better, rather than encroaching on public land. Florida already gave up 400,000 acres of National Forest land 75 years ago to create Eglin AFB. That is a great deal of public-access land that has already been restricted by the military. It is not acceptable to isolate even more land from the public.
Helen Wigersma		Note: I could not get the comment topic to shift to Blackwater River State Forest, but that is the entity I wish to address. I attended the Milton public meeting and feel that I heard one thing there. My later reading of the brochure that we received led me to feel that we hadn't gotten the "whole" story and increased the concerns I have for whether Blackwater is an appropriate location for the military exercises proposed. My primary concerns are three-fold: 1) damage or destruction of the natural resources such as environmentally sensitive areas with native plants, trees, wetlands, pitcher plant bogs, creeks, streams, and rivers as well as habitats and corridors for wildlife, especially protected species in the Forest; 2) noise pollution from aircraft, military vehicles, and use of "noise-generating expendables;" and 3) safe access by the public to the Forest for recreational purposes. In regard to #1, I am quite concerned that use of motorized vehicles, especially with "vehicle stream and wetland crossing" coupled with "cross-country dismounted movements" has the potential to cause significant damage, erosion or destruction of environmentally sensitive areas. How will troops know that they are in a pitcher plant area or a wetland with protected species? Why are vehicles being used to cross any wetlands? I thought we were told that vehicles would have to stay on roads. As for #2, noise pollution, my understanding at the meeting was that it would be minimal, simply coming in, dropping personnel and then coming back to retrieve them. The brochure implies that it is MUCH more significant than that. Supposedly, most of these exercises are at night - such activity may be intrusive on people camping in recreation areas, even if the actual exercise is not taking place right at that location. The noise of gunfire even if only blanks are used, can be upsetting for those of us who are using the Forest for hiking, canoeing, fishing. We are cognizant of designated hunting seasons, but random gunfire is unnerving. I am fre

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		provide my issues for consideration in the Environmental Impact Statement study that will be conducted and I will eagerly peruse the draft EIS document when it becomes available. Thank you Helen Wigersma
James A. Brady		I write to strongly oppose the proposed GRASI project as an ecological disaster waiting to happen. The activities that are described in your brochure are sure to disturb the ecological balance of BWRSF, with which I am familiar. Disturbance of wildlife and its habitat will result from air operations and amphibious maneuvers, as well as the preparation and maintenance of emitters, landing areas, drop zones, etc. If GRASI is implemented, BWRSF will no longer be an environmentally sound public state forest, open to multi-use by a wide variety of citizens, but rather will become a military enclave degraded by day to day operations. BWRSF currently serves as a glowing example of recovered longleaf pine forest, a small remnant of the great longleaf pine forest that once covered millions of acres in the SE United States, and part of a national effort to restore the ecological balance that it provided. It is also a corridor for tens of species of migratory birds, some considered threatened or at risk by federal standards, which cross the Gulf of Mexico twice a year on their way to and from breeding grounds. Furthermore, the state forest provides wintering habitat for tens of other species of birds that do not migrate past the coastal plain. The year-round intrusion of military operations into the forest will significantly degrade the habitat upon which these birds rely, and will add to the pressure those species are already under. It is inconceivable that amphibious operations in the forest will not have an equally or worse negative impact on the waterways that cross the forest than the land operations. The soils of the forest are soft and easily eroded, and the instability of creek and river banks during high water flow is notorious; this natural tendency will be exacerbated by heavy vehicular use to the detriment of the many fish and invertebrate species that will be negatively affected by increased sedimentation along the waterway. As a former Ecology Officer on two Naval Air Stations, I find it curious that the BRA
James R. Hill, III		The proposal to open up Blackwater River State Forest and Tate's Hell Swamp to Air Force maneuvers is totally unacceptable. Already jet flight maneuvers over the Apalachicola River is so disturbing to those of us who seek solitude in these remote wilderness and wild areas because of the extremely loud and annoying sound pollution coming from above. Give us a break! BRSF and THSF are wildlife gems to be cherished and protected not used as worthless wastelands to be further degraded with erosion, intrusion, plus vehicular and foot traffic. The tax-paying public has a right to expect that our state and federal government would protect these "protected" lands in perpetuity for future generations, and not use political heavy-handedness to take them away under the guise of

Name	Organization	Comment
		national security and air force training. Eglin Air Force Base is plenty large enough for the government to find space there for their maneuvers. Please stay out of our state and national forests.
Jane B. Streit, Ph.D.		Use of Tate's Hell for training is irresponsible. This land with it's amazing dwarf cypress, wildlife, and impact on Appalachicola Bay has already been damaged by the logging industry. These public lands are a source of recreation, as well. Consider training on abandoned airfields.
Janet R. Lloyd	Self	I am very concerned about the proposed military activities in Blackwater River State Forest. This forest is a public area used by many different groups and individuals. The forest is used by hunters, horseback riders, people using kayaks/canoes/ inner tubes, hikers, birdwatchers, campers and folks just wanting to get away from the hustle and bustle of the city life. People use the forest night and day 24/7 - 365 days a year. I cannot imagine how coordination of undisclosed (so far) numbers of military activities will fit with these activities. I see no way to know exactly when people are likely to be in any one particular area of the forest. Restrictions for use of areas of the forest would have to be put in place and this sounds like it would restrict public use of the forest. Some forest activities such as hunting are carefully controlled by date, but a family on the spur of the moment deciding to go camping would have no idea they might travel right into the middle of some night activities or they would have to find another place to camp if the drops or landings of the designated planes were in the area. I have been to the forest many times for many different reasons. I have been there to hike, participate in bird counts for the Forest Service, look for rare and endangered plants, look for butterfiles, look for migrating and resident birds and other wildlife. For a number of years I have done a nightjar survey (chuckwillswidows and nighthawks- types of birds that are active at night) on one of three nights right around the full moon in May. The count does not start until the moon clears the tall pines so we usually don't start until 10 pm. During these counts anywhere from 10-15 vehicles usually pass us. One year we almost had to give up the count because low flying planes were passing over head over and over on their way to drop bombs somewhere. They did stop just before we abandoned our count. The results of the count are compiled internationally to track the population of these birds. I have never been wo

Name	Organization	Comment
		make the roads more rutted than are now. This deterioration of the roadways would restrict public access since many of us do not drive trucks or four wheel drive vehicles. I have many, many concerns about these activities in BRSF and the effects on the forest life - including humans. We don't want to hear loud aircraft or bombs or shots while we are trying to have a quiet escape for a few hours or a weekend. The wildlife could not help being affected by the same noise levels and they cannot go home - they are home. Eglin Air Force Base is the largest base in the USA. It seems to me that better use of the huge area might be the best course instead of disrupting/disturbing more areas. I have many questions about how these activities would be coordinated, how often they would occur, etc, and hope more of this sort of info will be made available. It is interesting to me that the announcement of the meeting in Milton appeared in the Pensacola newspaper right before the meeting was to be held. There has not been another word about the proposal in the paper for the public to know about until today, the last day of public comment at this point. Why is this so? Anything that affects the public use of any area of the forest would affect many folks and wildlife/plants and I don't think has a place in BRSF. I do not favor any type of military use in BRSF at this point. Respectfully, Janet R. Lloyd [private contact information redacted]
Jennifer Bowers		I am a resident and property owner in Franklin County, Florida and I oppose any military use of Tate's Hell as outlined in the GRASI Landscape Initiative by the Eglin Air Force Base. I moved to Carrabelle because of its rural and natural environment. Surrounded by the Apalachicola National Forest and Tate's Hell State Forest, there are plenty of opportunities to enjoy hiking, canoeing, and camping in the back woods. As a Franklin county resident I often use these public recreational areas and treat them with the utmost respect of a conservationist. As a property owner I fear the military use of Tate's Hell will diminish my property value. Who wants to move in next to an extension of a military training base? I dread the thought of the added noises military training planes and helicopters will add to my peaceful and relaxing days. As an environmentalist I want to see public lands protected and preserved. I fear for the animals that live in the forest, due to increased human training exercises and landing of planes. I wonder how many of the 90 endangered plant species will be killed while building these air strips and training areas and additional human activity. I hate the thought of taking my canoe down the river and have planes or helicopters disturb the tranquility that I seek, let alone seeing military personnel during one of my walks. The Tate's Hell State Forest should be preserved for public land, not for military use. I am only one person, but please consider my plea and opposition to this action before making a decision to destroy this natural resource. Jennifer Bowers
Jim Cummins		I am against using either Tate's Hell or Blackwater Forests for military training or exercises. The military has a very poor track record of environmental awareness and/or care. Convenience cannot be a justifiable reason to put many endangered species of animal in the forest at risk. In addition the activities will be intense enough to cause some species to leave the forest, mainly black bears, and encroach on the surrounding populated area. We have bear problems now without more provocation. Tate's Hell Forest is a delicate environment, that will not survive the tramping of feet, nor the ATVs or other military vehicles. Accidents are inadvertent and will happen; an oil or fuel spill, or fire, or damage to stream banks will endanger the Apalachicola River and Bay. This is unacceptable. Do not use the forest for these activities.

Name	Organization	Comment
John Desrosiers	Private Citizen	It is your jop to protect and serve. In an indirect but important way, protecting the ecosystem of Tates Hell furthers that mission. Tates hell is integral to the health of Apalachicola Bay, and therefore integral to the marine ecosystem of the upper gulf coast. Any disruptive training can be done at many other less environmentally sensitive areas. I refrain from forwarding the standard letter assuming you have seen enough of those, but please understand the importance of Tates hell to millions of residents, visitors, and seafood lovers. Thank you very much
John L Collins	Aircraft Owners & Pilots Association	The Aircraft Owners and Pilots Association (AOPA) is a not-for-profit individual membership organization of nearly 400,000 pilots. AOPA's mission is to effectively serve the interests and needs of its members as aircraft owners and pilots and establish, maintain, and articulate positions of leadership to promote the economy, safety, utility, and popularity of flight in general aviation aircraft. Representing two thirds of all pilots in the United States, AOPA is the largest civil aviation organization in the world. We appreciate the opportunity to participate in the scoping process for the Environmental Impact Statement of the US Air Force Proposal for the Gulf Regional Airspace Strategic Initiative (GRASI) Landscape Initiative (GLI). Our main concern is with the use of an existing airport within the Blackwater River State Forest for military training activities. Blackwater Airfield (8FD3), identified as Munson Airfield in the 8-page Scoping Meeting handout, is a general aviation airstrip in the Blackwater River State Forest. The general aviation community, specifically our colleagues at the Recreational Aviation Foundation (RAF), did a lot of groundwork with the Florida Forest Service recently to reopen that airstrip for general aviation use. AOPA understands and supports the needs of our military to train efficiently and effectively but we would also request that the training activities be coordinated with the general aviation community in a timely fashion and not significantly interfere with the usage of 8FD3. Effective utilization of the Federal Aviation Administration's NOTAM system and coordination with the Blackwater River State Forest Supervisor will help to ensure that General Aviation pilots and aircraft are not inadvertently involved in a training event. Thank you for your consideration of our views on this issue. If we can be of further assistance, please contact our staff at [private contact information redacted]. Sincerely, John L. Collins Manager Airport Policy
John L Collins	Aircraft Owners & Pilots Association	The Aircraft Owners and Pilots Association (AOPA) is a not-for-profit individual membership organization of nearly 400,000 pilots. AOPA's mission is to effectively serve the interests and needs of its members as aircraft owners and pilots and establish, maintain, and articulate positions of leadership to promote the economy, safety, utility, and popularity of flight in general aviation aircraft. Representing two thirds of all pilots in the United States, AOPA is the largest civil aviation organization in the world. We appreciate the opportunity to participate in the scoping process for the Environmental Impact Statement of the US Air Force Proposal for the Gulf Regional Airspace Strategic Initiative (GRASI) Landscape Initiative (GLI). Our main concern is with the use of an existing airport within the Blackwater River State Forest for military training activities. Blackwater Airfield (8FD3), identified as Munson Airfield in the 8-page Scoping Meeting handout, is a general aviation airstrip in the Blackwater River State Forest. The general aviation community, specifically our colleagues at the Recreational Aviation Foundation (RAF), did a lot of groundwork with the Florida Forest Service recently to reopen that airstrip for general aviation use. AOPA understands and supports the needs of our military to train efficiently and effectively but we would also request that the training activities be

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John Veasey	None	From what is provided; there is no mention of how long the leasted land for TAs will be, no mention of public restricted areas or limitations, specifically to the rivers and creeks in the area where the public enjoy water sports, camping and hunting. How does the military expect to maintain security of the troops during hunting seasons? How is the public to be informed of any possibility of restrictions to the use of BRSF? This area is designated for the public use not the military. So why can't you do your training within the confines of the Eglin AFB range? The Air Force and Army desire to intrude on public lands does not set well and are not really justified. Just because you want training outside of land owned/controlled by Eglin AFB will not be readily accepted by the local home owners and public at large. More information is needed to understand the true scope of the training objectives. STOP, Short Term Offender Programwhat does this really mean? What are the objectives of this training program? A copy of the training syllabus is hereby requested.
Johnny Blue		Attention Mike Spaits I personally believe that any military use of this land would have a negative environmental impact to the land. I respectfully request that you count this as a vote against this project. Thank you. Johnny Blue
Joy Lynn Lewis	Personal	It is illusion that Tate's Hell is unused property. Take your bombs to the dead spaces on this earth we have already destroyed with our bombs. Bombs away.
Kalisa Myers	Miracle Mile Plastic Response Team	I am currently living in California, but am writing because you are about to severely impact my childhood playgrounds- land that is supposed to be available to my children- not for military testing purposes, but for tree-climbing, bug-biting, exploring purposes. Children do not develop right if they are inside all the time. They come out weak and allergic to everything. They need natural playgrounds. Finally, why not develop this area into a major eco-tourist spot? Already the birding trail is popular. Let other states ruin their natural splendor, but keep yours- now that's investment- not just for the short-term.
Kathi Chalk	Private Citizen	I am opposed to allowing Eglin AFB to lease and use BRSF and Hell's Tate Swamp for maneuvers. I am appalled that Eglin and Governor Scott would make an aggrement as important to the citizens of Florida with such little notification and time for public comments. This pristine, wild and natural area belongs to the people of Florida, and should kept in the condition it is in, which so many people, groups, and organizations have achieved through research and hard work. I wonder why in the world Gov Scott would approve a proposal in this manner. It smacks of selling our souls for a bit of commerce to me!
Kathy Evilsizer	Retired	I am writing to express my concerns and opposition to the use of Tate's Hell State Forest for military training exercises by Eglin Air Force Base as proposed under the Gulf Regional Airspace Strategic Initiative (GRASI) Landscape Initiative (GLI). The original purpose for converting the Tate's Hell tract from county property to state-owned forest was CONSERVATION: (1) for hydrological protection and restoration of Apalachicola Bay, (2) to conserve many rare and endangered habitats and species of flora and fauna found within the fragile

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		Tate's Hell State Forest environment, and (3) to preserve traditional and recreational uses of the land by the citizens whose tax monies were used for establishing this State Forest. The creation of Tate's Hell State Forest through the use of public funds was supported by Franklin County government and residents to protect and conserve the land for public and environmental benefits, and NOT for any usurping of those benefits by the military. There are serious consequences associated with the GRASI proposal and the following concerns must be considered. All plants, wetlands, water, insects, birds and wildlife will be severely impacted by the fuel exhaust of the low-flying (tree level) helicopters. That water flows into the already dying Apalachicola Bay. The noise alone from these planes, helicopters and training exercises will devastate all birds and wildlife, as well as create untold problems for citizens living anywhere near that vicinity. The life cycles of nocturnally foraging animals will be disrupted by holding military training exercises primarily at night. The airspace used by private pilots to land at our local airports will be compromised by giving priority for the use of that same airspace to military aircraft. Any military radar emitters installed within Franklin County have the potential to disrupt civilian and private pilot communication devices and may even have health consequences for citizens who live nearby. Many of the residents of Franklin County depend on the bounty Tate's Hell State Forest provides through hunting and fishing to feed their families in this economically disadvantaged community. The unique ecology found within Tate's Hell State Forest such as the Dwarf Cypress Swamp and over 90 species of rare and endangered wildlife (such as the Red-Cockaded Woodpecker) are at risk of being damaged or destroyed by military training exercises and/or accidents that may occur during such military usage. Tate's Hell State Forest has one of the largest Black Bear populations in Florida, as well
Kelly Jones		Dear Mr. Spaits, I am writing in opposition to the proposed annexing of BRSF and THSF for DOD use. First, BRSF is one of the most valuable state properties in terms of unique ecological value, both in housing many rare and endemic flora and fauna that make up a rich part of Florida's natural heritage, as well as serving to connect the forests of EAFB with those of Conecuh NF in adjacent Alabama. All combined, these three properties form the largest contiguous tract of remaining longleaf pine forest. Many years and dollars have gone into the restoration of this gem of a forest, and doing anything to jeopardize the balanced stewardship that currently exists would be a tragedy. Second, BRSF is an excellent multi-use resource for the citizens of Florida, as well as the many visitors we have every year, who play an integral role in Florida's economy. Open access to properties like BRSF make up a long-standing part in the Florida panhandle's culture, and preserving this will serve not only those who are using it now, but hopefully countless generations to come. If congress was wrong to approve the BRAC proposed moves to EAFB, as well as the addition of the F-35 program, Florida should not have to pay for congress' miscalculations by giving up integrity of, and access to some of it's best remaining treasures. With these points in mind, I offer TWO VIABLE ALTERNATIVES TO THE PROPOSED PLAN: 1)

Name	Organization	Comment
rame	Organization	EAFB should become more adept at scheduling missions within EAFB's current property boundaries (some ranges and air space currently remain relatively unused for large parts of the day on many days), or 2) EAFB should begin looking at paying more for their new testing and training needs by purchasing some St. Joe Paper Company land that is also nearby, but is much less valuable ecologically or for public use. Either way, I believe strongly that our national security will be just as intact, and we won't have to lose things that we may otherwise never get back. Thank you for considering these comments. humbly, Kelly Jones
Kenny Presnell		Dear Sirs: RE: Opposition to the inclusion of Tate's Hell State Forest in the US Air Force's Gulf Regional Airspace Strategic Initiative (GRASI) Landscape Initiative I am writing to express my concerns and opposition to the use of Tate's Hell State Forest for military training exercises. I was born and raised in the panhandle area of Florida. This is my home. I cherish its forests, wetlands, rivers, and wildlife. I feel that they should be protected for future generations to enjoy and cherish as well. I would like to bring to your attention a few of my concerns regarding this matter. Deer population concerns: The State of Florida has identified that the current deer population of younger bucks is over harvested. Therefore, for the 2014-2015 deer seasons in northwest Florida, they have proposed an antler restriction to be implemented using Interstate 10 as a dividing line. This means that the supposedly over harvested younger-aged class of bucks in the Tate's Hell State Forest and the Apalachicola National Forest are to be further impacted due to the increased military incursion into their habitat that will disrupt their lives both day and night. Instead of allowing the hunters more land to hunt on, reducing the impact on the deer herd in a given area, this military training initiative is going to further concentrate the deer herd into smaller areas both reducing the available food source and creating an environment for disease. Florida is one of the few states to thus far not have a documented case of chronic wasting disease and has restricted the importation of deer from out of state. One of the contributing factors to this disease it has been said is crowding many deer together. This disease not only spreads from close contact with infected deer but contaminates any area that a deer has eliminated his bodily waste in where it will precipitate both in nearby vegetation and water until another unaffected deer just happens to drink or feed. To make matters worse we have an increasing problem with bears and coyot

Name	Organization	Comment
-ivanie	Organization	
Name	Organization	which would place them right in the middle of any military training. There is a concern whether the animals would remain in these areas due to the increased burden, both night and day, of a military presence by both vehicles and air traffic. So if this airstrip placed any burden on the wildlife, it would have a direct impact on these camper hunters. With the already limited access to public hunting lands due to many other state wildlife concerns, these people would no longer be able to feed their families the wonderful bounty they are able to harvest on our Florida public lands. The hunters would have to go somewhere else to hunt and compete for space with the other hunters that are using other areas of public land that may already be overburdened. Imagine this scenario: You worked all week. You have planned and prepared. You stayed up late Wednesday and Thursday nights moving in your camper and setting up a pristine campsite in anticipation of a beautiful family weekend adventure. After you get off work on Friday and get everybody gathered up and drive to your campsite at the turnoff of the paved road there is a roadblock and you're informed that this area is closed to public access for the next two weeks. So you have to turn around and go home disappointed while your camper and other possessions just sit there at the campsite. Hopefully, your possessions are safe; but you never know. As previously mentioned, this area has been designated by the State as a part of the bear management area. This is only one scenario; but I'm sure you can come up with more on your own. Damage to the ecosystem: Traffic from the supplies, equipment, and military personnel entering and leaving the wildlife areas and the on-going training would greatly damage the ecosystem. Since I am familiar with this area, I know that they will need to build new roads to access the training areas. And since this area is very wet to start with, the construction of an airstrip will require both removal and new fill of dirt to be brought into the ar
		Apalachicola National Forest in the past. At the time of the accidents, this created a great disruption to the serenity of the forest as well as ecological damage. However, we did receive a benefit of new roads being built to the crash sites which increased our access to the interiors of some of the large blocks of land. Increased road maintenance costs due to traffic: The increase in heavy vehicle traffic, i.e. heavy trucks as well as the number of vehicles, on the paved and unpaved roads that will be utilized by the military vehicles will impact the condition of the road surfaces that the counties and State are

Name	Organization	Comment
		already challenged trying to maintain with their limited budgets. Noise: The surrounding area, as well as Tate's Hell State Forest, already fall within a training zone that the military fighter planes use for dog fighting. I have had many an outing disrupted by low-flying military aircraft some of which were so close to the ground that on one occasion when a fighter made a tight turn over our heads we were able to see him wave at us on the ground. Any increase in this air traffic, day or night, would greatly diminish the enjoyment of time spent in the outdoors on our public land. Night training would also disturb people in the area who are trying to sleep. This is not just hunters during hunting season, but people that camp and fish throughout the year as well as those living in nearby towns. They will not only have to deal with the air traffic but also the vehicle traffic driving through their towns, neighborhoods, or the camping areas while they're trying to sleep. For all these reasons, as well as many more that I have not mentioned, I am adamantly opposed to the use of Tate's Hell State Forest for military training exercises. Sincerely, Kenny Presnell [private contact information redacted]
Kent Kinsinger		Too many endangered species and too sensitive environmental area to go forward with this plan. The plan calls for air strips to be built. How do you build air strips with out impacting an area? Drainage flow will go from natural to man induced and that impact will alter things for the better? Roads have to be built and that will not impact the area? Noise from helicopters and jets will be controlled how? Will jets / helicopters dump fuel in the area if they experience an emergency? Is there final plan drawings available for the public to view? Will electric power be installed at the sites and where? Will fuel tanks be installed at the site? How will wildlife and fauna be impacted? Regardless of your impact study our way of life will change. Will there be a impact study on people that live here to see if the quality of our lives change? Tate's Hell is a natural treasure that I use to hunt, fish and kayak. I moved here for the way of life. To see it change is unacceptable. I am a veteran and a patriot so my concerns are not about the military just this plan you have. Tourism, will there be a study on that also? Kent Kinsinger [private contact information redacted].
Knox Bagwell	Outings Chair Big Bend Sierra Group	With reference to the propose use of Black Water State Forest and Tate's Hell Forest for robust training exercises: Having personally paddled/camped the complete Ochlockonee river, spending a total of several weeks, yearly, in both tracks of proposed training landsthese lands were bought and decreed to be environmentally sensitive and protected due to their unique makeup of both uplands and wetlands environment and home to many "at risk" species, along with providing sensitive water filtration and recharge to a wide range of estuariesall of which would be highly jeopardized with proposed use by the Air Force. I get a yearly pass from the Jackson Guard to paddle on the AFBand know they can be very good stewards of the environment. The several military operations in the Panhandle area comprise some significant land areasI suspect there is ample, non restricted, lands to conduct this type of robust training, without the Air Force putting a heavy carbon footprint on very environmentally sensitive, public lands. I request to be put on the notification list concerning this proposal and that the Air Force seriously consider alternative sites for these types of operations. Thank You Knox Bagwell [private contact information redacted]
Krysta Davis		Re: training grounds in Tate's Hell/ Appalachiacola National Forest. Are you kidding??? Please stop this. This has been a sneaky and sad attack on an area in FL that has a low population. My family lives in a lot of different areas in FL but

Name	Organization	Comment
		we have a property that we are ALL members of a trust to maintain and are horrified by this. Beautiful, natural area - what are you/they thinking???
Leslie Poole	Self	I am writing to express my concerns and opposition to the use of Tate's Hell State Forest for military training exercises by Eglin Air Force Base as proposed under the Gulf Regional Airspace Strategic Initiative (GRASI) Landscape Initiative (GLI). The original purpose for converting the Tate's Hell tract from county property to state-owned forest was CONSERVATION: (1) for hydrological protection and restoration of Apalachicola Bay, (2) to conserve many rare and endangered habitats and species of flora and fauna found within the fragile Tate's Hell State Forest environment, and (3) to preserve traditional and recreational uses of the land by the citizens whose tax monies were used for establishing this State Forest. The creation of Tate's Hell State Forest through the use of public funds was supported by Franklin County government and residents to protect and conserve the land for public and environmental benefits, and NOT for any usurping of those benefits by the military. There are serious consequences associated with the GRASI proposal and the following concerns must be considered. DO NOT DO THIS. Local government and local residents are opposed.
Linda Cooper		I wish to make a strong objection to the use of Blackwater River State Forest and Tate's Hell as an Air Force training site. These are not suitable areas for these types of activities. Thank you, Linda Cooper
Linda H Smith	Citizen	Dear Air Force, Please find another site that would be more suitable for your training needs other than Tate's Hell. Tate's Hell is well known for its biodiversity and habitat for many endangered or threatened animals and plants. This place is unique and the value of the habitat can not be mitigated. This region brings many visitors from out of state who come to the Gulf Coast in the panhandle to relax, swim, fish, hike and enjoy the last remnants of Old Florida. This area is held dear to people who love rural settings for recreation. Please help to preserve these last patches of untarnished Florida. Keep Tate's Hell and this region of Florida for your children so that they too may know what else Florida can be to us. Thank you.
Lois D. Griffin	None	This area of Florida is called the Forgotten Coast because it is off the beaten track and retains some vestiges of primal Florida nature. I want it to stay that way. There is precious little conservation being done and little public access to natural areas - meadows, swamps, beaches, bays - in N. Florida. I fervently plead that you not place these facilities in these areas. The impact from vehicles alone, much less the troops, would start a chain of destruction in the flora and fauna, and ultimately, the Gulf. The military should purchase land from private owners elsewhere. For example, St. Joe owns thousands of acres in N. Florida. I would rather my taxpayer dollars go toward said purchases rather than my access to natural beauty and resources be limited by their destruction. No matter what an EIS concludes, ANY impact is too great, in my opinion.
Lynn Wilder	Self	The public, the US EPA and FLDEP and FLDOH need to see how the DOD can justify how their "non hazardous" activies in and above Tate's Hell State Forrest will NOT adversely impact this complex and delicate ecosystem and public health. Please elaborate how the US EPA regulations for "no loss of wetlands" will be met. Please include the scope of operations (time of year, frequency and area of activity). Otherwise, how can the public provide input on "the NEPA process is intended to help federal officials make decisions based on an understanding of environmental consequences" (slide 5 of the USAF

Name	Organization	Comment
		presentation)? The GRASI power point and handout are extremely vague in the scope of what is intended and leaves open the possibility of expansion. I fully understand and support the need for military training, but asking for public comment on something that is so vague is unreasonable. I strongly oppose the USAF developing training locations (especially airforce landing strips and roadways for heavy vehicles) in Tate's Hell State Forrest. The bay is already stressed from drought and river water supply issues from upstream cities, and endangered species are present in Tate's Hell and the surrounding area. Will the USAF adjust their activities according to important wildlife preservation issues (e.g., Bald Eagle mating and raising their kids season)? Have there been studies about the effect of emitter sites on wildlife? If so, please provide this information to the community as soon as possile. Finally, tourists come to Apalachicola year-round to relax and enjoy wildlife and peace and quiet. No carnivals, no water slides, and no fast food restaurants on the beach. Having day/night aircraft traffic will detract (if not eliminate) the reason that people come to visit. Tourism is a large part of the life blood of Apalachicola and the surrounding area. There must be other less pristine locations for training efforts that are within the emitter site criteria (which Tate's Hell is not). The emitter site criteria2.5 to 3 hr driving distance from Egling AFV isn't met. The 1.5-1 hr flight time criteria, available roads (minimal to no improvements), and available aircraft landing areas do not currently exist. You are violating your own criteria. If you plan to install the latter, this will have a large environmental impact. I recommend the GRASI decision for using Tate's Hell State Forrest for emitter sites and/or military trainingNO
Lynn Wilder	Self	The public, the US EPA and FLDEP and FLDOH need to see how the DOD can justify how their "non hazardous" activies in and above Tate's Hell State Forrest will NOT adversely impact this complex and delicate ecosystem and public health. Please elaborate how the US EPA regulations for "no loss of wetlands" will be met. Please include the scope of operations (time of year, frequency and area of activity). Otherwise, how can the public provide input on "the NEPA process is intended to help federal officials make decisions based on an understanding of environmental consequences" (slide 5 of the USAF presentation)? The GRASI power point and handout are extremely vague in the scope of what is intended and leaves open the possibility of expansion. I fully understand and support the need for military training, but asking for public comment on something that is so vague is unreasonable. I strongly oppose the USAF developing training locations (especially airforce landing strips and roadways for heavy vehicles) in Tate's Hell State Forrest. The bay is already stressed from drought and river water supply issues from upstream cities, and endangered species are present in Tate's Hell and the surrounding area. Will the USAF adjust their activities according to important wildlife preservation issues (e.g., Bald Eagle mating and raising their kids season)? Have there been studies about the effect of emitter sites on wildlife? If so, please provide this information to the community as soon as possile. Finally, tourists come to Apalachicola year-round to relax and enjoy wildlife and peace and quiet. No carnivals, no water slides, and no fast food restaurants on the beach. Having day/night aircraft traffic will detract (if not eliminate) the reason that people come to visit. Tourism is a large part of the life blood of Apalachicola and the surrounding area. There must be other less pristine locations for training efforts that are within the emitter site criteria (which Tate's Hell is not). The emitter site criteria2.5 to 3 hr dri

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Madeleine H. Carr	Self	Thank you for permission to comment on the nw landing sites in Tate's Hell and other areas in the Bradwell Bay area. You must be tired of hearing that such suggestions are absolutely contrary to the sustainable land use these areas provide. Can you explain to me how you will protect the already stressed bears, the absolutely beautiful and rare carnivorous plants, the history and our human sanity that has to get away from noise pollution to keep it all together. NOISE. Isn't that what the Air Force is known for? There are so many other very disturbed lands north of your proposed areas. Please, please consider those. We like to walk, hike, bird watch and through-hike on the Florida Trail. We don't want helicopters hovering around. All in all, this is a dreadful plan. Madeleine H. Carr, Ph.D.
Marcia Boothe		A state forest needs to protect its natural resources. Activities such as war games which include survival skills which involve eating plants and animals that are supposed to be protected is unacceptable, there is no way that soldiers will be sble to distinguish listed species from other common species. Also watershed in BRSF is too vulnerable to be used for military maneuvers. Adapt your scheduling like the rest of us who spend a great deal of our lives waiting for things too.
Margo Posten	Citizen	There are too many endangered species for the military to be running around doing exercises. Some of these species are found no where else in the world. There are plenty of other places to conduct such activities. Stay out of our public lands and find somewhere else for this training!
Marilyn Hogan, Guy Hogan		My husband and I attended the hastily called meeting regarding the Eglin U.S. Air Force proposal to establish training activities in Tate's Hell State Forest. Tate's Hell is our back yard, and it is one of the reasons we retired to Franklin County. It is a precious resource that drains into the Apalachicola River (a State Aquatic Preserve) and Bay with tributaries to East Bay (our home). In addition, the property was purchased by the state with Conservation and Recreation Lands (CARL) Program funds. It is home to unique and endangered species such as the red-cockaded woodpecker, gopher tortoise and several plant species. We support our military, but question the advisability of establishing a presence remote to it's base of operation that has been purchased for conservation and recreation in a unique environmentally sensitive area. GRASI is not welcome here.
Marilyn Oberhausen		Development in the Florida Panhandle has meant that the "woods" of our childhood are more critical than ever. Black Water River State Forest (and Tate's Hell State Forest) are large tracts of land—owned by the people of Florida for the purposes of habitat preservation and recreation—that provide for the natural habitat of many animal and plant species, including some endangered or threatened. Intrusions into the forest by noise creating helicopters and significant troop maneuvers disturb the habitat for these species, often with devastating results. Such use should not be a part of the forest environment. People use the forests as well, for hiking, canoeing, fishing and hunting, bird watching, and camping. Troop maneuvers both on land and water erode the land, degrade water quality and damage the forest for people to use, too. Where will people go to experience a true night sky in a natural setting, since

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		the development of beach fronts and other coastal areas means that light pollution is always present in these places? What about the family who wants to camp, canoe, or otherwise experience nature away from the noise and lights of the town or city? If these large tracts of land are not retained in their current state of relative solitude for present and future generations to enjoy, then we will have lost another precious asset of our state. I live on the east side of Pensacola, on the western shore of Bayou Texar, and on many a night we can already hear and feel the percussions from the practice bombing runs at Eglin. Please at least keep such noise and activities on the current Eglin base instead of spreading it out further and further. If the Air Force needs more land, then let them buy out adjacent property owners. They should have been doing that all along. Please do not penalize the animals and plants of Black Water State Forest, the land and waters of the forest, or the people who want and need the forest for its ability to connect them with the natural world. We pay a high price if we lose that to an ill-advised proposal by the Air Force for more training area. I am also familiar with Tate's Hell State Forest, as both of my parents were born and raised in Apalachicola. My father grew up at a time when duck hunting and fishing were common activities on Apalachicola Bay. People visit Apalachicola now for the experience of the small town, the pristine beaches of St. George Island, and the remoteness and quiet of Tate's Hell and the Apalachicola now for the experience of the small town, the pristine beaches of St. George Island, and the remoteness and quiet of Tate's Hell and the Apalachicola now for the experience of the small town, the pristine beaches of St. George Island, and the remoteness and quiet of Tate's Hell and the Apalachicola now for the experience of the small town, the pristine beaches of St. George Island, and the remoteness and guiet of Tate's Hell stone is remote the forests for reasons th
Mark Nobles	Carrabelle Airport	Based on the Air Force current inability to work with general aviation, I am opposed to any future decline of available airspace for general aviation. In past personal experience with denied request, I have found myself in harms way simply because the airspace was scheduled for training, not used, and since the schedule was not corrected the airspace remained active. Any additional airspace restriction would have an adverse effect on the air commerce in and out of Franklin county. In simple analogy, "We don't want a Bully in our SAND BOX" especially when your report card does not say "Plays well with others". Please do not hesitate to call if you want to know what I really think. [private contact information redacted]
Martha E. Scott	Property Owner in Franklin County	As a property owner in Franklin County, FL whose property adjoins THSF I am mortified to think that you would consider it suitable to be used for training activities. My property once was part of Harbison City, which was basically decimated by the army for training in WWII. It is still is being searched for unexploded munitions after 70 years. Tate's Hell was purchased by the State and approved by the citizens of Franklin County as a wildlife refuge and is home

Name	Organization	Comment
		to many endangered species. It is a very fragile ecosystem that acts as a buffer for storm surge from the coast. It is connected to the Apalachicola Bay which is in dire condition already due to tampering. Franklin County is a poor rural area that depends on its waters and forests for supporting and feeding families that live here. This lack of judgement and concern for the area and its citizens is just appalling.
Mary Elsheimer		Please leave Tate's Hell alone. This biodiverse virgin forest should not be used as a training site.
Mary Pittman		While I support the Air Force and all it does for us, I hope it will tread lighly on the Blackwater State Forest area. The river and creeks are so beautiful and pristine a great treasure to be protected. Please if this goes through, which I'm sure it will, think of the future users of this forest, including your children and grandchildren. We only have one earth. Thank you.
Mary Rogers	None	Comment concerning Tate's Hell State Forest. I live in Liberty County (Sumatra) which is very near Tate's Hell State Forest listened to the meeting held in Apalachicola on You Tube and did not like the negative comments. Not everyone feels this way. Our military deserve the best training available and should be able to utilize any place that would be suitable for that purpose. There have been training activities in this community with helicopters flying over my property in the past at night and we were not disturbed, neither were our animals, horse, goats, etc. When we see jets flying over it is just reassurance that our military are on duty. Everyone seems to be promoting their own agenda, but bottom line is that our military are protecting us so that we maintain our freedom to even have the opportunity to speak out about or question government actions. Thank You for this opportunity. William Rogers / Mary Rogers [private contact information redacted]
MaryAnn Friedman		This comment is meant to address the impact of proposed training exercises and Emitter Sites on Blackwater River State Forest. For 15 years I have been studying lepidoptera on Eglin Air Force Base Reservation and Blackwater River State Forest. I have made numerous discoveries of rare and imperiled butterflies in both of these lands in Okaloosa County, Walton County and Santa Rosa County. As a Citizen Scientist working privately and sharing research data with the State of FLorida Dept of Forestry and with Jackson Guard I have seen first hand the rich diversity and unusual concentration of wildlife contained in these tracts. In recent studies undertaken by FNAI and citizen volunteers under a FFWC Wildlife Grant, these two areas have been deemed to hold the highest concentration of \$1 and \$2 species of butterflies in the state. Already over the years there has been an obvious degradation occuring in the Forest and the Reservation due to habitat loss and the growth of the Air Force Missions. It has been only with the supreme effort of the good people of Jackson Guard and the Division of Forestry that these very unique areas have survived the insults of manmade events and those brought on by nature itself up until now. The reservation has been degraded by traffic pressure, repeated missions and clearing of land for training. I fear that the very fragile ecology, hydrology and geology of BWRSF will not be able to withstand the onslaught of training missions and that the unique and rare plant and animal populations which currently are holding on by a thread will be lost forever. This would be a tragedy. The State Forest is not a military base. It has been set aside as a refuge for animals and people to admire and enjoy. It is an oasis of great beauty which needs to be preserved for the future. Please do not use the forest for air force

Name	Organization	Comment
		training.
Melissa Starbuck	Concerned Citizen	I am writing to express my concerns and opposition to the use of Tate's Hell State Forest for military training exercises by Eglin Air Force Base as proposed under the Gulf Regional Airspace Strategic Initiative (GRASI) Landscape Initiative (GLI). The original purpose for converting the Tate's Hell tract from county property to state-owned forest was CONSERVATION: (1) for hydrological protection and restoration of Apalachicola Bay, (2) to conserve many rare and endangered habitats and species of flora and fauna found within the fragile Tate's Hell State Forest environment, and (3) to preserve traditional and recreational uses of the land by the citizens whose tax monies were used for establishing this State Forest. The creation of Tate's Hell State Forest through the use of public funds was supported by Franklin County government and residents to protect and conserve the land for public and environmental benefits, and NOT for any usurping of those benefits by the military. There are serious consequences associated with the GRASI proposal and the following concerns must be considered. All plants, wetlands, water, insects, birds and wildlife will be severely impacted by the fuel exhaust of the low-flying (tree level) helicopters. That water flows into the already dying Apalachicola Bay. The noise alone from these planes, helicopters and training exercises will devastate all birds and wildlife, as well as create untold problems for citizens living anywhere near that vicinity. The life cycles of nocturnally foraging animals will be disrupted by holding military training exercises primarily at night. The airspace used by private pilots to land at our local airports will be compromised by giving priority for the use of that same airspace to military aircraft. Any military radar emitters installed within Franklin County have the potential to disrupt civilian and private pilot communication devices and may even have health consequences for citizens who live nearby. Many of the residents of Franklin County depend on the
Michael Bailey	None (Resident of Apalachicola)	Please do not proceed with the plans to civilize Tate's Hell Forest. It's one of the few places wildlife can exist unmolested.
Norman Friedman MD		I understand the need for our forces to train but I also would hope that it is recognized that there are areas of Blackwater that require absolute protection and should be off limits to any operations including any and all pitcher plant bogs and seeps.

Name	Organization	Comment
Peggy Baker	Francis M. Weston Audubon Society	lam writing of behalf of the Francis M. Weston Audubon Society to express our concerns that the GRASI Landscape Initiative will have a great impact on the birds that utilize the Blackwater River State Forest at any time of the year. The BRSF's Ten-Year Resource Management Plan states as one of their forestry management strategies they will: "Cooperate with the United States military to facilitate mission essential trailing in a manner that will not adversely impact natural resources, forest management or public access." It is our belief that this Initiative will negatively impact all of the birds that use the forest. During the years of 2009-2012, volunteers from FMWAS conducted a seasonal bird survey of RRSF. We found 181 species of birds that were in the forest sometime during the year. There are 52 species that live year round in the forest. Another 34 species migrate into the forest during the spring and summer to nest. This means that a total of 86 species nest and raise their young within BRSF. Most birds return to the same nesting area year after year, sometimes to the same tree. But we know that birds will abandon a nesting territory if disturbed by loud noises, or physical intrusions by humans or predators. They may even abandon chicks in the nest if the intrusions continue for a period of time. During one of our survey trips into the forest, we observed a military helicopter fly less than 50 feet above a Bald Eagle's nest. The tree swayed with the downdraft. The noise was frightening. We thought the young chick would jump out of the nest. It takes years for Eagles to construct their huge nests but they will not return to a nest that has repeated interferences. The Bald Eagle is recovering from near extinction and is protected by federal law. We fear this species will be affected by GRASI activities. The Red-cockaded Woodpecker is also an endangered bird species found in this reconstructed wiregrass ecosystem. BRSF has a recovering population thanks to the FFS. This woodpecker takes several years to dr

Name	Organization	Comment
		also has been shown that wintering habitats are disappearing. BRSF has 107 species that spend the cold season in this warmer climate. Our survey shows that there are large number of birds using the forest as their winter habitat. Under the Migratory Bird Program, the U. S. Fish and Wildlife Service established a list of Birds of Conservation Concern, 2008. Twenty-three(23) of these bird species have been surveyed in Blackwater River State Forest. This forest is very important to all of these migratory bird species. Our survey found that large numbers of migratory birds are present in this habitat during the year. Military activities within the forest could deprive these birds of a safe place to stay and feed during the time away from their breeding grounds. Francis M. Weston Audubon Society requests that this EIS investigates the impact on endangered birds, all resident birds, all migratory birds and the burning schedules that maintain this wiregrass ecosystem. Peggy Baker, President's Council Francis M. Weston Audubon Society Pensacola, Florida
Priscilla Yotter		I am writing to express my concerns and opposition to the use of Tate's Hell State Forest for military training exercises by Eglin Air Force Base as proposed under the Gulf Regional Airspace Strategic Initiative (GRASI) Landscape Initiative (GLI). The original purpose for converting the Tate's Hell tract from county property to state-owned forest was CONSERVATION: (1) for hydrological protection and restoration of Apalachicola Bay, (2) to conserve many rare and endangered habitats and species of flora and fauna found within the fragile Tate's Hell State Forest environment, and (3) to preserve traditional and recreational uses of the land by the citizens whose tax monies were used for establishing this State Forest. The creation of Tate's Hell State Forest through the use of public funds was supported by Franklin County government and residents to protect and conserve the land for public and environmental benefits, and NOT for any usurping of those benefits by the military. There are serious consequences associated with the GRASI proposal and the following concerns must be considered. All plants, wetlands, water, insects, birds and wildlife will be severely impacted by the fuel exhaust of the low-flying (tree level) helicopters. That water flows into the already dying Apalachicola Bay. The noise alone from these planes, helicopters and training exercises will devastate all birds and wildlife, as well as create untold problems for citizens living anywhere near that vicinity. The life cycles of nocturnally foraging animals will be disrupted by holding military training exercises primarily at night. The airspace used by private pilots to land at our local airports will be compromised by giving priority for the use of that same airspace to military aircraft. Any military radar emitters installed within Franklin County have the potential to disrupt civilian and private pilots within Franklin County have the potential to disrupt civilian and private pilots to land at our local airports will be compromised by giving pr

Name	Organization	Comment
		questions asked were ignored. For all of these reasons, I am resolutely opposed to the use of Tate's Hell State Forest for military training exercises. Sincerely, Priscilla Yotter
Reddoch Williams	Sky Park Owner Association	I represent approximately 125 general aviation pilots, aircraft owners, users of airspace in the general vicinity of the Crestview vortac, Blackwater Forest area, a number of general aviation private airstrips, all of whom are users of the affected airspace and ground recreational facilities designated to be used in the GRASI proposal. We are very concerned that the proposed uses will directly restrict our freedom of use of the airspace currently open to our use in the MOA, as well as our use of the ground recreational facilities including Munson airstrip and it's associated campground / recreational facilities. Please assure us that your proposed use of these areas will not result in our exclusion from or current use of these areas. Thank you, Reddoch Williams Sec Treas Sky Park Owner Assoc
Renay Cummings	Homemaker	Please please reconsider the use of Tate's Hell for your training! It is one of the LAST remaining untouched parts of a ruined Florida, both visually and audibly. There are many plants and animals that are virtually extinct and exist only there. Audibly, you will ruin the quiet and peaceful nature of this last tiny piece of old Florida. Walton County has already been "lost" to development. Can't you find somewhere there? The noise alone from your planes will absolutely RUIN that area.
Riley Hoggard	Self	Proposed Training Activities at FL State Forests 1. The need to use public land for military training must be justified, especially given the amount of DOD land available in the panhandle. Simply stating that hazardous training takes precedent is not adequate; data must be provided to allow appropriate analysis. If necessary: -the Air Force should be provided access to other DOD land, i.e. Navy land, for training -recreational use (hunting, hiking, camping) of Eglin Air Force Base lands should be discontinued to provide additional training areas before other public lands (state forests) are considered 2. Public use of state forest lands must not be impeded or restricted for the sake of military use. Any closure of public lands, however temporary, is unacceptable. 3. How does the proposed action adhere to the stated purposes of the State Forest System? This must be addressed in light of the legislation establishing the state forests. Military personnel participating in ground training activities cannot be considered normal forest users as stated at the scoping meeting. 4. The proposed military ground operations are clearly incompatible with traditional forest use. The number and type of proposed training activities far exceed what would be considered a reasonable proposal that could be incorporated into the forest use plan. Given the proposed use sites, there appears to be little possibility that conflict with the public can be avoided. Public use must take precedent. If conflict is unavoidable, military use is unacceptable. 5. The impact analysis of training operations, especially night operations, must include the following: -Effect on forest users including campers, backcountry campers, hunters, hikers, canoeists, horseback riders, bicyclists, birdwatchers, and all traditional usersQuestions to be addressed: How can aircraft use of Blackwater Field during nighttime hours not impact campers using the adjacent Krul Lake Campground? How can proposed ground maneuvers not impact other forest users such as hiker

Name	Organization	Comment
		noise, lights, and vehicle, aircraft, and personnel movement. Since many forest species are nocturnal for feeding, movement, reproduction, offspring rearing, etc., the impacts of night operations must be analyzed in depth. 7. No site improvements/construction should be undertaken. Specifically, no trees should be removed/felled, no sites compacted/hardened, and no foreign material (gravel, asphalt) brought in and used. 8. Stream and wetland crossings of personnel and/or vehicles should be avoided. Significant downstream sedimentation and streambank erosion could result. Even if established forest roads and trails are to be utilized, the crossing sites must be improved to avoid direct contact with the water resource and riparian zone. 9. Any future expansion/increase in the number or extent of MOA's or restricted airspace is to be avoided. Implemented activities should have no effect on airspace use, especially by general aviation. 10. Much of the proposed aircraft activity will occur within the altitudes generally used by civilian aircraft on local flights. Potential aircraft conflicts with the increased military usage must be addressed. Again, no impact on general aviation will be acceptable. 11. Any projected or future expansion of the airspace or landscape initiative must be evaluated as part of the present analysis. Future actions need to be assessed along with the current proposal as a single, complete project.
Riley Hoggard	Self	Any emitter sites to be established within the state forests should be restricted to developed sites i.e. the forest HQ or the former DJJ sites. If utilities are required, no other forest sites are adequate and should not be considered. In fact, it is recommended that no state forest sites be utilized. A myriad of other suitable sites are available beyond public lands. Use of forest service watch tower sites throughout the counties is an innovative approach that needs to be expanded to avoid the need to use the state forests. Airports, Navy OLF, shopping center parking lots, and even church parking lots could easily meet the emitter site requirements and should be considered. Additional site searches should be conducted. Other sites to consider include schools, car lots, farms, and ranches. Given the plan to set-up and move the emitter site daily, conflict with the regular use of these sites could easily be avoided. The fact that individual agreements would likely be necessary is not a legitimate reason to discount these options.
Robin Rickel Vroegop	Florida Geotourism Associates	I have concerns about the impacts of military training activities, particularly off-road vehicle use, on the vegetative and biological communities in state-owned conservation lands. These large State Forests tracks are set aside for their value as buffers to disturbance of sensitive ecosystems and waterbodies, and they contain numerous documented occurences of State and Federally-listed Threatened and Endangered Species. I refer to USACERL Technical Report 98/79 May 1998 entitled, "Management of of Maritime Communities for Threated and Endangered Species", by Sopia Gehihausen and Mary G. Harper. It describes the detrimental effect of foot and vehicular traffic on soil compaction and hydrology on sandy maritime dune ridges, swales, and wetlands, such as those found in Tate's Hell State Forest. Training activities with ORV usage in areas such as these must be extremely limited. I am also concerned about the effect of nighttime training activites, as well as daytime activities on bird and animal breeding and migration cycles. Non-disturbance during these time is critical for productivity of many species, for example, the Threatened Southern Bald Eagle, which is also afforded special Federal protection as our national emblem. Birds and other animals are particualrly sensitive to light and noise disturbance in the nighttime, in general.

Name	Organization	Comment
Ruth McArthur	Self	Please do not use Tate's Hell State Forest for training. I am especially disturbed by the idea of landing planes there. This is a pristine piece of wilderness and home to an amazing variety of birds, mammals and plant life that would be disturbed by machinery and personnel in the area. Gov. Scott has said that this venture will improve our nation's security, which of course is important. However, there is certainly disused, already disturbed land that can be acquired and used for military purposes. When Winston Churchill heard that Parliament was proposing a cut to funding for the arts in order to boost military spending, he replied, "Then what's the point?" This applies here - do not destroy the best features of our country in order to protect our country.
Sam Shannon		I am against the activities proposed in Blackwater River State Forest, as well as Tate's Hell State Forest. The term "non-hazardous" training is used to describe the safety and security of the trainees. However, it does not ensure the safety of biology of the two State parks mentioned above. While the impact of the training on the environment may be kept to a minimum, that doesn't change the fact that it is still impacting wildlife as well as our water shed. Increased use of trails and other areas of the parks would increase erosion. This could be potentially harmful to aquatic organisms, especially if harmful chemicals are used in the training's. I would like a public report of the proposed training's to be made, as to better determine the damage to the environment. If that can not be done, I would consider using a different area to train, such as the underused Naval Air Station Whiting Field Golf Course, located Less than 6 miles from Blackwater River State Forest. Or the woods surrounding Hurlburt Field, Less than 10 miles from Tate's Hell State Forest.
Sara	None	Please do not enter Tate's hell, this is the last of real Florida and is to be protected forever.
Serge Latour	Lalutra LLC	Tate's Hell is a pristine environment. One critically damaged by past activities and essential to the health and culture of our bay. The Army Corp of Engineers has already sacrificed it to their own " governed" wills. As they just now admitted " They indicated that they are not governed by the overall benefits of the cause - just what is regulated by law. This battle has gone on since the 70's and it won't end here. This state is now suing Georgia over this issue. This is the same watershed. This river basin is essential to the existence of the bay and the generations old culture it supports. Now you want to join in this destruction. Tate's Hell was purchased by the people of this nation to restore what was destroyed by greed and personal gain. Please explain to me why you want to destroy this. There are thousands of yet defined species with untold benefits to mankind still living here in this swamp yet to be discovered and appreciated for their benefit to mankind. You all know as well as I do that there are no " Non-Hazardous" uses of this land. Just the sound of the jets and choppers over head hinders the life cycle of River Frogs and untold other species. We are still dealing with un-exploded munitions from WWII training . This is a FUDS site. Give this place a break. Its why it was purchased by the people for the people and will be protected BY THE PEOPLE. Your not fighting a war in the swamp anyway. If you think " who cares about a swamp? wait and see. Wrong place to practice for the wrong war. You not fighting in the swamp- your fighting for oil and water. Well, here we have water. Go fight for oil in the desert. I spent a lot of my soul in the mid east on both side's of the water war's. To bring this now into my swamp is a real war. Stop and think. Please. The world cries over the damage that has been done to the Amazon and all the wonders it still holds as it is being devoured by mans greed. Tate's Hell, the Forgotten Coast, and the Apalachicola

Name	Organization	Comment
		National Forest, have one of the most bio-diverse and yet discovered bionomes in the world. You can't be serious about destroying this. We will not let you. Remember the lessons of the old war philosophers. Choose you battles carefully.
Sharon Warren	Public Health Student UWF and a BRSF Nearby Resident	I say NO to military activities in the state forest. The land is not be used for this and it's environmentally irresponsible. "The Air Force says it needs to conduct training off the 250,000-acre Eglin reservation because of scheduling conflicts and competing demands on restricted areas at the base (PNJ)." Perhaps better planning and land management should have been performed. There are many abandoned bases - why not go there? The Mission of State Forest land: The mission of the USDA Forest Service is to sustain the health, diversity, and productivity of the Nation's forests and grasslands to meet the needs of present and future generations. Motto: Caring for the Land and Serving People The phrase, "CARING FOR THE LAND AND SERVING PEOPLE," captures the Forest Service mission. As set forth in law, the mission is to achieve quality land management under the sustainable multiple-use management concept to meet the diverse needs of people. It does include military operations or exercises. Period. With all due respect, stay out of the forest. It's a Sanctuary not a landscape for war games. Thank you, Sharon A. Warren
Sheila Blue		Dear Sir, this is just a short plea for our land. This is involving the Forest of Tate's Hell that our Gov. bought as a way to protect it. I do not believe that the Military use of it would be protecting it; even though I believe the Military is a responsible group generally, but when it comes to virgin forest with the trees and animals that depend on us to protect their habitat; I feel that the robust military air and land training in this forest would be detrimental. Please reconsider this plan and find a more suitable place for the military and let this virgin Forest of ours stay as is for many generation to come. We have so little Forest left and we need it to protect not only the animals but the humans as well. Please consider my plea and let my voice count as a vote against the Military use of Tate's Hell Forest. Thank you. Respectfully Sheila Blue
Sheila Hauser	Carrabelle Area Chamber of Commerce	Franklin County, Florida and especially the Carrabelle area relies heavily on tourism as one of our main industries and economic engines. The tourism industry supports small businesses that rely heavily on the visitors to Franklin County. Visitors that come to Franklin County are looking for nature-based activities from kayaking, hiking, fishing, camping, bird-watching, flora and fauna and just to get back to nature in a natural environment. As the Past-President of the Carrabelle Area Chamber of Commerce and current Marketing/Public Relations Consultant, I know from a first hand experience what the visitors are looking for. One of our main marketing messages is our natural wonders and nature-based activities, if we were to change this it would have a negative impact on our tourists and definitely hurt the economy in Carrabelle and Franklin County. With the current situation in our Bay with the oysters, we are now more dependent on the tourism industry for jobs. I was also on the Franklin County Tourist Development Council for 4 years and understand the market and the effects of changes. Tate's Hell State Forest is a huge attraction to visitors to Carrabelle and a big part of our economy. The tourism industry touches every small business in Franklin County including the following: Restaurants, retail, vacation rentals, hotels, RV/Camping Parks, B & B's, grocery stores, charter fishing captains, guides, outdoor and adventures shops, bait stores, marinas, hardware stores, and many more. We have a busy season from May to August, but the off-season from September to April is extremely slow

Name	Organization	Comment
Nume	Organization	and the small businesses have a difficult time staying open and making a profit. Franklin County is a beautiful place and we love our pristine and natural wonders. We feel that Tate's Hell State Forest is a true "Gem" and "Natural Wonder" for Franklin County and we need to preserve it, just that way and not make any changes. Thank you, Sheila Hauser Southern Breeze Media Marketing Consultant for Carrabelle Chamber of Commerce www.carrabelle.org
Susan Alvarado		I am writing to express my concerns and opposition to the use of Tate's Hell State Forest for military training exercises by Eglin Air Force Base as proposed under the Gulf Regional Airspace Strategic Initiative (GRASI) Landscape Initiative (GLI). The original purpose for converting the Tate's Hell tract from county property to state-owned forest was CONSERVATION: (1) for hydrological protection and restoration of Apalachicola Bay, (2) to conserve many rare and endangered habitats and species of flora and fauna found within the fragile Tate's Hell State Forest environment, and (3) to preserve traditional and recreational uses of the land by the citizens whose tax monies were used for establishing this State Forest. The creation of Tate's Hell State Forest through the use of public funds was supported by Franklin County government and residents to protect and conserve the land for public and environmental benefits, and NOT for any usurping of those benefits by the military. There are serious consequences associated with the GRASI proposal and the following concerns must be considered. All plants, wetlands, water, insects, birds and wildlife will be severely impacted by the fuel exhaust of the low-flying (tree level) helicopters. That water flows into the already dying Apalachicola Bay. The noise alone from these planes, helicopters and training exercises will devastate all birds and wildlife, as well as create untold problems for citizens living anywhere near that vicinity. The life cycles of nocturnally foraging animals will be disrupted by holding military training exercises primarily at night. The airspace used by private pilots to land at our local airports will be compromised by giving priority for the use of that same airspace to military aircraft. Any military radar emitters installed within Franklin County have the potential to disrupt civilian and private pilots to land at our local airports will be compromised by giving priority for the use of that same airspace to military aircraft. Any military radar
Susan Macken		I attended the recent scoping session held in Apalachicola to become familiar with the proposed utilization of Tate's Hell State Forest through the GRASI initiative. After hearing the presentation and public comments and completing

Name	Organization	Comment	
		additional research, I am adamantly opposed to THSF being utilized in this manner. There are over 90 types of endangered species in this wonderfully rich ecosystem. Continued protection of this area is critical! Having USAF training maneuvers occur in this area is totally incompatible with protection of this area. As our County Commission has pointed out, THSF represents over half of the land in Franklin County. This land was removed from the tax rolls and set aside to PRESERVE, PROTECT, and CONSERVE natural resources for the benefit of the public. Our local "public" indeed turned out for the scoping session. Those in attendance came from all corners of our county and represented a cross-section of those of us who call Franklin County home. The message you heard that evening was a resounding no! Reportedly, the proposed GRASI initiative has been in the works for several years. Why then, are we just hearing about it? Why were we provided with such a short window of opportunity to provide written comment? Why were we - the public - the last to hear of these plans? Your presentation was long on generalities and lacking in details. Many of your descriptors are unmeasurable and give us no clear picture of the of the potential future of THSF should you proceed with this initiative. I heard statements such as "to the extent practical" and "infrequent use". Exactly what do these terms mean? Franklin County's future prosperity rests, in large part, on tourism. The visitors to the Forgotten Coast come to explore this largely unspoiled area of Florida. They come to fish, kayak, boat, and swim in its waters. They come to hike the miles of wilderness trails. They come to observe our wildlife, migrating butterflies, and countless species of birds. Utilization of THSF is incongruent with this future. I respectfully ask that the use of THSF through the GRASI initiative be reconsidered. Franklin County simply does not want you.	
Tammy		I am writing to express my concerns and opposition to the use of Tate's Hell State Forest for military training exercises by Eglin Air Force Base as proposed under the Gulf Regional Airspace Strategic Initiative (GRASI) Landscape Initiative (GLI). The original purpose for converting the Tate's Hell tract from county property to state-owned forest was CONSERVATION: (1) for hydrological protection and restoration of Apalachicola Bay, (2) to conserve many rare and endangered habitats and species of flora and fauna found within the fragile Tate's Hell State Forest environment, and (3) to preserve traditional and recreational uses of the land by the citizens whose tax monies were used for establishing this State Forest. The creation of Tate's Hell State Forest through the use of public funds was supported by Franklin County government and residents to protect and conserve the land for public and environmental benefits, and NOT for any usurping of those benefits by the military. There are serious consequences associated with the GRASI proposal and the following concerns must be considered. All plants, wetlands, water, insects, birds and wildlife will be severely impacted by the fuel exhaust of the low-flying (tree level) helicopters. That water flows into the already dying Apalachicola Bay. The noise alone from these planes, helicopters and training exercises will devastate all birds and wildlife, as well as create untold problems for citizens living anywhere near that vicinity. The life cycles of nocturnally foraging animals will be disrupted by holding military training exercises primarily at night. The airspace used by private pilots to land at our local airports will be compromised by giving priority for the use of that same airspace to military aircraft. Any military radar emitters installed within Franklin County have the potential to disrupt civilian and private pilot communication devices and may even have	

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Nume	Organization	health consequences for citizens who live nearby. Many of the residents of Franklin County depend on the bounty Tate's Hell State Forest provides through hunting and fishing to feed their families in this economically disadvantaged community. The unique ecology found within Tate's Hell State Forest such as the Dwarf Cypress Swamp and over 90 species of rare and endangered wildlife (such as the Red-Cockaded Woodpecker) are at risk of being damaged or destroyed by military training exercises and/or accidents that may occur during such military usage. Tate's Hell State Forest has one of the largest Black Bear populations in Florida, as well as a very large population of nesting American Bald Eagles. Tate's Hell is also part of the Great Florida Birding Trail and is visited by birdwatchers, photographers, nature lovers, hunters, fishermen, local residents and tourists from far away. Lastly, during the Scoping Meetings, the public was not even allowed to ask questions; any questions asked were ignored. For all of these reasons, I am resolutely opposed to the use of Tate's Hell State Forest! Sincerely, Tammy Nelson		
Timothy D. Kerns	Aus Ret.	questions asked were ignored. For all of these reasons, I am resolutely opposed to the use of Tate's Hell State Forest for military training exercises. We want to		

Name	Organization	Comment	
		of nesting American Bald Eagles. Tate's Hell is also part of the Great Florida Birding Trail and is visited by birdwatchers, photographers, nature lovers, hunters, fishermen, local residents and tourists from far away. Lastly, during the Scoping Meetings, the public was not even allowed to ask questions; any questions asked were ignored. For all of these reasons, I am resolutely opposed to the use of Tate's Hell State Forest for military training exercises. Sincerely, Timothy D. Kerns	
Todd	Bream Fishermen Association	Blackwater State Forest is one of the most species-rich forests in the country. The longleaf pine trees and myriad plants and animals, many of which are threatened or endangered, keep you and I alive. That forest cleans the water that we drink and the air that we breathe. Every living species that calls the forest home, whether it be a tiny ant or a Florida black bear, is part of a food chain that includes homo sapiens sapiens (me and you!). A protected State Forest is not the place for military maneuvers. Living species are masterpieces, legends. Their brethren in the Florida panhandle have been bought, sold, built on, and all but destroyed. They've already been relegated to this small patch of wilderness. It may seem like BRSF is endless, but understand it's the last of this type of ecosystem left on EARTH! There is nowhere else for these legends to go. Let's let them be, without being stomped on or driven over; even the ants.	
Victoria Kovach		Don't know if the comment topic is correct, but do know that wild or semi-pristine land in this area does need to be kept that way as between commercial usage, housing and military, an ecosystem - or ecosystems - do suffer at the hands of humans. There's so much room on the reservation, it's hard to imagine needing more. In a hundred years, what would be the most important - an area compromised by some pretty severe human activity or one that has been preserved? Poor critters should have a vote. Unfortunately, they don't. I do want to say that you do have some good programs like saving the stands of long-needle pine, etc. That is to be commended.	
Wanda Lemon		I oppose the use of military training exercises in the Blackwater State Forest and the Tate's Hell State Forest (near Apalachicola). The use of these exercises in protected wildfire areas could be very devastating and disruptive to many of the plant and animals who live there, disturbing their habitats and endangering their lives. In addition, if the military were to utilize these forests for their purposes, civilians would not be allowed to enjoy the hiking, canoeing, horse riding, camping, etc. that these parks currently allow. That enjoyment would be taken away from us who regularly enjoy these parks. To allow the military to do this would disturb the wildlife that live there and the people who visit there. Please, keep military training exercises on military bases — do not encroach upon the serenity and the enjoyment that these parks give to so many, including the plants and animals who live there. Besides, they were there first.	
William Holcomb	Self	As a former EOD tech, I know training is important, but so are our State Forests. Training activities and any landing facilities, radio telemetry sites, or other options planned for Tates Hell State Forest and Blackwater State Forest should instead be put in Apalachicola National Forest or Ocala National Forest where the federal government can repair any damage done, fight any fires started, clean up oil and fuel spills, and monitor trash disposal. The US Military is notorious for open pit burning and burying things that industry could not do. There are other bases, and even the Avon Park bombing range to operate on.	

Name	Organization	Comment	
		Please leave our state forests alone.	
William Owen		Please reconsider using our forest for training, We grew up near Griffass AFB in Rome NY and are painfully aware of how This type of training can go bad. A close friend was in charge of cleanup after fuel spills and plane and chopper crashes in the Adirondack Mts. Some site still have not fully recovered. We have set aside few small areas to be wild and free, Please let Tates hell Be.	

WRITTEN SCOPING COMMENTS







August 21, 2013

Brigadier General David A. Harris Commander Department of the Air Force Headquarters 96th Test Wing (AFMC) 101 West D Avenue, Suite 132 Eglin Air Force Base, FL 32542-5495

Ref: Gulf Regional Airspace Strategic Initiative (GRASI) Landscape Initiative (GLI) Eglin Air Force Base Santa Rosa, Okaloosa, and Franklin Counties, Florida

Dear Brig Gen Harris:

On August 14, 2013 the Advisory Council on Historic Preservation (ACHP) received notification of the proposed development of an Environmental Impact Statement (EIS) for the 96th Test Wing-led partnership with the State of Florida and other state and federal agencies to expand the capacity of the region to safely host military test and training operations. Our comments were requested regarding the National Environmental Policy Act (NEPA) review. We have reviewed the materials provided by the 96th Test Wing and have only the following procedural comments about how the EIS relates to the Section 106 review process.

Section 106 of the National Historic Preservation Act (NHPA, 16 U.S.C. 470f) requires federal agencies to "take into account" the effects of their projects and programs on historic properties. The ACHP's regulations implementing Section 106 ("Protection of Historic Properties," 36 C.F.R. Part 800) set forth this review process, whereby the federal agency consults with the State Historic Preservation Officer (SHPO) and sometimes Indian tribes or Tribal Historic Preservation Officers (THPOs) to determine if the proposed project will have an effect on a property listed on or eligible for listing on the National Register of Historic Places, and if so, what measures might be appropriate to avoid, minimize, or mitigate that effect. The statutory language of Section 106 requires that it be completed "prior to the approval of the expenditure of any Federal funds on the undertaking....(emphasis added)."

In order to ensure effective and efficient compliance with Section 106, the ACHP encourages the 96th Test Wing to initiate the Section 106 process early by notifying the Florida SHPO, Indian tribes, and other consulting parties about the proposed undertaking, as set out in our regulations at 36 C.F.R. Part 800.2(c). Through early consultation your agency will be able to determine the appropriate strategy to comply with Section 106. The 96th Test Wing should continue consultation with the Florida SHPO, Indian tribes, and other consulting parties to identify and evaluate historic properties and to assess any potential adverse

ADVISORY COUNCIL ON HISTORIC PRESERVATION

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effects on historic properties. If you determine, through consultation with the consulting parties, that the undertaking will adversely affect historic properties, the 96th Test Wing must notify the ACHP and provide the documentation detailed at 36 C.F.R. § 800.11(e).

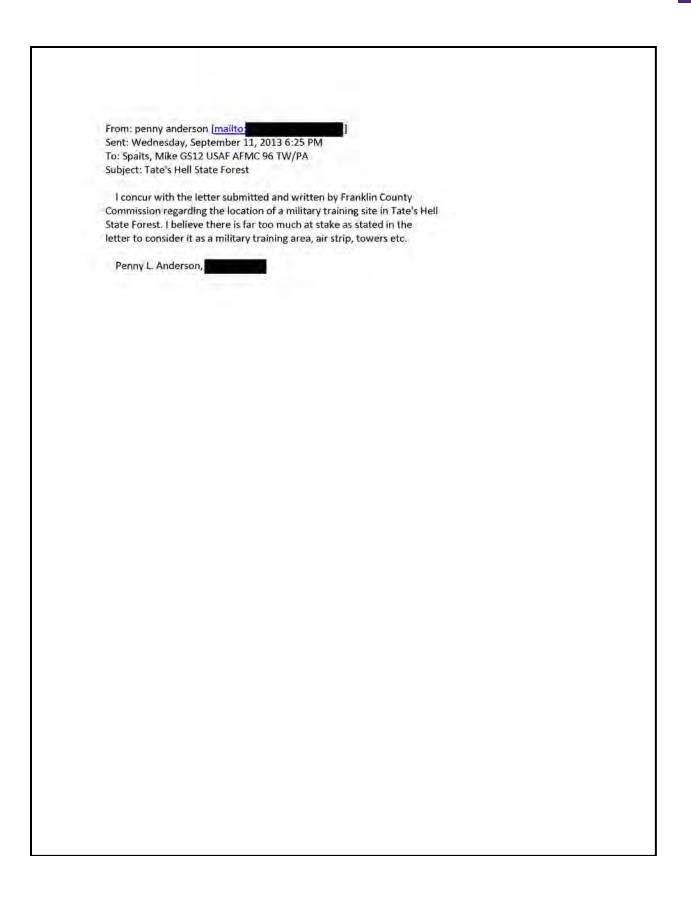
According to the Council on Environmental Quality's regulations, an EIS will result in a Record of Decision (ROD) that "shall state ... what the decision was ... [and] ... whether all practicable means to avoid or minimize environmental harm from the alternative selected have been adopted, and if not, why they were not" (40 C.F.R. § 1502.2, emphasis added). Accordingly, the issuance of a ROD conveys the agency's final decision on an undertaking and details the nature of that decision. In order to meet the statutory and regulatory requirements of the Section 106 process, the ROD should be issued concurrent with or after the completion of the Section 106 process.

We look forward to working with you on this undertaking. Should you have any questions as to how your agency should comply with the requirements of Section 106, please contact Ms. Katharine R. Kerr by telephone at (202) 606-8534 or by e-mail at kkerr@achp.gov.

Sincerely

Caroline D. Hall Assistant Director

Office of Federal Agency Programs Federal Property Management Section



From: Haley Barfield [mailto:

Sent: Monday, September 09, 2013 10:43 AM To: Spaits, Mike GS12 USAF AFMC 96 TW/PA

Subject: TATES HELL

I am writing to express my concerns and opposition to the use of Tate's Hell State Forest for military training exercises by Eglin Air Force Base as proposed under the Gulf Regional Airspace Strategic Initiative (GRASI) Landscape Initiative (GLI). The original purpose for converting the Tate's Hell tract from county property to state-owned forest was CONSERVATION: (1) for hydrological protection and restoration of Apalachicola Bay, (2) to conserve many rare and endangered habitats and species of flora and fauna found within the fragile Tate's Hell State Forest environment, and (3) to preserve traditional and recreational uses of the land by the citizens whose tax monies were used for establishing this State Forest. The creation of Tate's Hell State Forest through the use of public funds was supported by Franklin County government and residents to protect and conserve the land for public and environmental benefits, and NOT for any usurping of those benefits by the military. There are serious consequences associated with the GRASI proposal and the following concerns must be considered. All plants, wetlands, water, insects, birds and wildlife will be severely impacted by the fuel exhaust of the low-flying (tree level) helicopters. That water flows into the already dying Apalachicola Bay. The noise alone from these planes, helicopters and training exercises will devastate all birds and wildlife, as well as create untold problems for citizens living anywhere near that vicinity. The life cycles of nocturnally foraging animals will be disrupted by holding military training exercises primarily at night. The airspace used by private pilots to land at our local airports will be compromised by giving priority for the use of that same airspace to military aircraft. Any military radar emitters installed within Franklin County have the potential to disrupt civilian and private pilot communication devices and may even have health consequences for citizens who live nearby. Many of the residents of Franklin County depend on the bounty Tate's Hell State Forest provides through hunting and fishing to feed their families in this economically disadvantaged community. The unique ecology found within Tate's Hell State Forest such as the Dwarf Cypress Swamp and over 90 species of rare and endangered wildlife (such as the Red-Cockaded Woodpecker) are at risk of being damaged or destroyed by military training exercises and/or accidents that may occur during such military usage. Tate's Hell State Forest has one of the largest Black Bear populations in Florida, as well as a very large population of nesting American Bald Eagles. Tate's Hell is also part of the Great Florida Birding Trail and is visited by birdwatchers, photographers, nature lovers, hunters, fishermen, local residents and tourists from far away. Lastly, during the Scoping Meetings, the public was not even allowed to ask questions; any questions asked were ignored. For all of these reasons, I am resolutely opposed to the use of Tate's Hell State Forest for military training exercises. Sincerely,

Haley Nicole Barfield		

----Original Message----

From: Fran Bauer [mailto:

Sent: Monday, September 09, 2013 6:44 PM To: Spaits, Mike GS12 USAF AFMC 96 TW/PA

Cc: florida@tnc.org

Subject: Tates Hell HELLISH plan

Dear Sir,

I was appalled when it came to my attention that the Air Force is planning on using Tate's Hell for training. I am a five year resident of this area, migrated from the Atlanta area, and well know the remarkable ecosystem that is enclosed in Tate's Hell. It is one of the most valuable things about living in this area. An area that has been reserved for our country for all time, unchanged and able to return to its original state. I am thoroughly opposed to this usage plan.

I am writing to express my concerns and opposition to the use of Tate's Hell State Forest for military training exercises by Eglin Air Force Base as proposed under the Gulf Regional Airspace Strategic Initiative (GRASI) Landscape Initiative (GLI). The original purpose for converting the Tate's Hell tract from county property to state-owned forest was CONSERVATION: (1) for hydrological protection and restoration of Apalachicola Bay, (2) to conserve many rare and endangered habitats and species of flora and fauna found within the fragile Tate's Hell State Forest environment, and (3) to preserve traditional and recreational uses of the land by the citizens whose tax monies were used for establishing this State Forest. The creation of Tate's Hell State Forest through the use of public funds was supported by Franklin County government and residents to protect and conserve the land for public and environmental benefits, and NOT for any usurping of those benefits by the military. There are serious consequences associated with the GRASI proposal and the following concerns must be considered. All plants, wetlands, water, insects, birds and wildlife will be severely impacted by the fuel exhaust of the low-flying (tree level) helicopters. That water flows into the already dying Apalachicola Bay. The noise alone from these planes, helicopters and training exercises will devastate all birds and wildlife, as well as create untold problems for citizens living anywhere near that vicinity. The life cycles of nocturnally foraging animals will be disrupted by holding military training exercises primarily at night. The airspace used by private pilots to land at our local airports will be compromised by giving priority for the use of that same airspace to military aircraft. Any military radar emitters installed within Franklin County have the potential to disrupt civilian and private pilot communication devices and may even have health consequences for citizens who live nearby. Many of

the residents of Franklin County depend on the bounty Tate's Hell State Forest provides through hunting and fishing to feed their families in this economically disadvantaged community. The unique ecology found within Tate's Hell State Forest such as the Dwarf Cypress Swamp and over 90 species of rare and endangered wildlife (such as the Red-Cockaded Woodpecker) are at risk of being damaged or destroyed by military training exercises and/or accidents that may occur during such military usage. Tate's Hell State Forest has one of the largest Black Bear populations in Florida, as well as a very large population of nesting American Bald Eagles. Tate's Hell is also part of the Great Florida Birding Trail and is visited by birdwatchers, photographers, nature lovers, hunters, fishermen, local residents and tourists from far away. Lastly, during the Scoping Meetings, the public was $\,$ not even allowed to ask questions; any questions asked were ignored. For all of these reasons, I am resolutely opposed to the use of Tate's Hell State Forest for military training exercises. Sincerely,

Frances V Bauer

----Original Message---

From: Erica Bruckner [mailto:

Sent: Friday, September 06, 2013 11:18 AM To: Spaits, Mike GS12 USAF AFMC 96 TW/PA

Subject: Tate's Hell

I am writing to express my concerns and opposition to the use of Tate's Hell State Forest for military training exercises by Eglin Air Force Base as proposed under the Gulf Regional Airspace Strategic Initiative (GRASI) Landscape Initiative (GLI). The original purpose for converting the Tate's Hell tract from county property to state-owned forest was CONSERVATION: (1) for hydrological protection and restoration of Apalachicola Bay, (2) to conserve many rare and endangered habitats and species of flora and fauna found within the fragile Tate's Hell State Forest environment, and (3) to preserve traditional and recreational uses of the land by the citizens whose tax monies were used for establishing this State Forest. The creation of Tate's Hell State Forest through the use of public funds was supported by Franklin County government and residents to protect and conserve the land for public and environmental benefits, and NOT for any usurping of those benefits by the military. There are serious consequences associated with the GRASI proposal and the following concerns must be considered. All plants, wetlands, water, insects, birds and wildlife will be severely impacted by the fuel exhaust of the low-flying (tree level) helicopters. That water flows into the already dying Apalachicola Bay. The noise alone from these planes, helicopters and training exercises will devastate all birds and wildlife, as well as create untold problems for citizens living anywhere near that vicinity. The life cycles of nocturnally foraging animals will be disrupted by holding military training exercises primarily at night. The airspace used by private pilots to land at our local airports will be compromised by giving priority for the use of that same airspace to military aircraft. Any military radar emitters installed within Franklin County have the potential to disrupt civilian and private pilot communication devices and may even have health consequences for citizens who live nearby. Many of the residents of Franklin County depend on the bounty Tate's Hell State Forest provides through hunting and fishing to feed their families in this economically disadvantaged community. The unique ecology found within Tate's Hell State Forest such as the Dwarf Cypress Swamp and over 90 species of rare and endangered wildlife (such as the Red-Cockaded Woodpecker) are at risk of being damaged or destroyed by military training exercises and/or accidents that may occur during such military usage. Tate's Hell State Forest has one of the largest Black Bear populations in Florida, as well as a very large population of nesting American Bald Eagles. Tate's Hell is also part of the Great Florida Birding Trail and is visited by birdwatchers, photographers, nature lovers, hunters, fishermen, local residents and tourists from far away. Lastly, during the Scoping Meetings, the public was not even allowed to ask questions; any questions asked were ignored. For all of these reasons, I am resolutely opposed to the use of Tate's Hell State Forest for military training exercises.

Sine	cerely,
Erio	ca Bruckner

September 8, 2013

Mr. Mike Spaits Eglin AFB Public Affairs Office 96 TW/PA, 101 West D. Ave., Room 238 Eglin AFB, Florida 32542-5499

Dear Mr. Spaits

For environmental reasons and for safety of local residents I urge you to cancel plans to develop a military base in Tate's Hell State Forest. The endangered and rare species and the ecosystems in which they exist require protection, not devastation. Similarly, the people of Franklin County, Florida, although few in number, rely heavily on the natural resources of the area, To risk depleting them is to put the people in danger.

For these reasons I urge the United States Air Force to reject the GRASI proposal.

Sincerely,

Janice F. VanDenBerg Byrne

Jource F. Syme

Eglin AFB Public Affairs Attn Mike Spaits 101 West D Avenue, Room 238 Eglin AFB, FL 32542-5499

Please see comments below for the Eglin Gulf Range Strategic Initiative Landscape Initiative Environmental Impact Statement.

- In the background of the document explain why no public scoping meetings were held near Eglin AFB since it is an Eglin initiative as indicated by the title.
- 2. Develop other alternative sites to Black Water State Forest (BWSF) and Tate's Hell State Forrest (THSF) such as leasing private land, other county or city land or using other military bases such as Tyndal AFB.
- 3. Analyze the use of the M. C. Davis greenway east of Eglin that was acquired in Summer 2013 for this training.
- 4. Explain the cost/benefit analysis that determines the ground travel times acceptable for the alternatives to the use of BWSF and THSF. Explain which travel routes were analyzed to determine travel times for each discrete training location. Analyze how many more ground training activity locations would be available with additional increments of travel time. Example: two more ground training sites are available with the addition of 30 minutes of additional travel time.
- 5. Explain the cost/benefit analysis that determines the air travel times acceptable for the alternatives to the use of BWSF and THSF. Explain which routes were analyzed to determine travel times for each discrete training location. Analyze how many more ground training activity locations would be available with additional increments of flight time. Example: two more training sites are available with the addition of 30 minutes of additional air travel time. Describe the aircraft and airspeeds used in this analysis.
- 6. Consider that citizens may use the BWSF and THSF on a spontaneous basis. This training will preclude that type of use. How will the community be compensated for the denial of spontaneous use? Taxes have been used to support these parks and the DOD proposes to use these areas without compensation.
- 7. Provide an analysis that quantifies the loss of entrance fees and tourism business that the use of the BWSF and THSF for training will cause. Quantify the long term loss of tourism revenue and park use when the full proposed training use frequency of these areas is realized.
- 8. Consider that helicopter and small arms fire are not sounds that citizens travel to state parks to hear.

- 9. When the sound profile levels for helicopter and small arms use in BWSF and THSF are published in the Draft EIS illustrate profiles at lower dB levels than 65 dB such as 40 dB so the public can understand how far away they may be disturbed by the noise from the training activity.
- 10. For the 12 emitter sights provide a cost benefit analysis to determine the viability of other alternative land based locations and/or off shore floating platforms that may be moved for different mission scenarios.
- 11. Analyze and present the changes to the local building codes such as building height restrictions that will be required at each of the selected 12 emitter sites.
- 12. For the 12 emitter sites disclose what preliminary site selection activities or real estate agreements that have been performed or entered into in support of this initiative as of September 12, 2013. Describe any preliminary discussions that have been conducted reference the placement of the 12 emitter sites.
- 13. Disclose any use of BWSF and THSF that occurs prior to approval of the final EIS.
- 14. Document the controls and monitoring procedures that will used to ensure compliance with the mitigation procedures stipulated in the EIS for the activities in the BWSF and THSF. If an agency other than DOD will perform this function document how the agency budgets for this activity and that agency's authority to perform enforcement functions. If the Agency proposed to perform this function has no enforcement authority, so state.
- 15. Quantify the number and type of low level flights and depict their flight path(s) that are proposed as part of this activity.
- 16. Document and provide a description of the noise and aircraft mitigations that will be used on low level military flight training.
- 17. Analyze the economic and property value effects of the noise from the additional low level flights that will result from this activity.
- 18. Provide justification that the analysis of only the non-hazardous training activities is not piece-mealing the NEPA process since the conduct of hazardous training is clearly contemplated at this time.

I request to be notified of which of my comments are found to substantive and a paper copy of the draft document.

H. H. Caldwell

mondefore

Dear Mr. Spaits,
I appreciate you all coming to Apalachicola and reviewing the plan being drafted for Eglin AFB. I must admit after reading the material provided on line and also listening to the meeting I still am a bit confused as to the scope of the GRASI Landscape initiative. I am hoping that perhaps it will be more clear once I can read the EIS and therefore would request a copy of this be sent to me either by e-mail (preferred given the limited time to respond) or by mail.
My address is below:
Doug Carter

11 September 2013

Comments on Eglin AFB Proposed Grasi Initiative

After reading and listening to the presentation on the GRASI Initiative I must admit I am more than confused about the scope of the proposal the AFB is making and therefore have to oppose much of it until such time as more information can be proposed. My opposition is based on the impact this will have in a number of areas including but not limited to the following:

1) No alternatives have been proposed so that the public can weigh in and help the military find alternatives. This is both partially driven by the vagueness of the proposal itself especially with respect to the activities that will take place but also due to the targeted nature of this proposal. That is this proposal is specifically targeted at the use of publicly protected areas because of their remote nature and the desirability with regards to the purposes that have been stated. The later issue is of concern as these areas were specifically paid for by the taxpayer to protect lands and ecosystems and this intent is clear when reading the Florida Forest Service Web site from which I have extracted some information below. I have highlighted in red the last sentence that clearly states what the primary purpose of the Forest Service is and how this fits into that.

"The natural resources found on Tate's Hell State Forest are very diverse due to the unique and various natural community types. At one time Tate's Hell State Forest supported at least 12 major community types which included: wet flatwoods, wet prairie, seepage slope, baygall, floodplain forest, floodplain swamp, basin swamp, upland hardwood forest, sandhill, pine ridges, dense titi thickets and scrub. Currently, the forest contains approximately 107,300 acres of hydric communities such as wet prairie (contains a vast diversity of plant species), wet flatwoods, strand swamp, bottomland forest, baygall, and floodplain swamp. Past management practices have disrupted the function of the natural ecosystems on Tate's Hell State Forest. The restoration of these ecosystems is a primary objective of the Florida Forest Service."

It is not clear how the GRASI initiative as it relates to Tate's Hell forest can be pushed forward without impacting the primary objective of the Forest Service.

- 2). The purpose of the proposal has not been clearly defined especially with respect to the need to do ground operations in these protected areas. It appears that what started out as a local initiative to share airspace and build an airspace plan that could serve all has grown into a land grab by the operational groups at Eglin. Pushing this plan forward under the umbrella of the need to aid training for our troops that will be deployed overseas does not help eliminate this concern.
- 3) The social and economic effects are not clearly stated in any fashion. Vague references to potential jobs have been made but there is no clear definition of how or even why these proposed "limited actions" would generate any jobs other than perhaps service in a convenience store. And given that no details on the scope duration or even planned events have been given (other than a listing) one can only infer that all the social and economic effects will be negative. That is lower quality of life for persons living in this region as helicopter come in and out or fixed wing aircraft approach a "KTM or MTE" or negative economic impact because this once pristine area is now being fouled by the constant noise of

an army on the move. This is not acceptable to anyone and just because the population base is not large enough to make as large of a complaint does not mean it is acceptable here.

4) Environmental Consequences: The impact that these proposed actions could have on the local area are so widespread that I am shocked that anyone would seriously even consider this initiative, especially as it relates to any action on the ground. Vectoring to various emitters if limited to high altitude and limited in terms of time of day and to fixed wing aircraft does likely not have a large environmental impact (although I am not sure what is being used to run this equipment and how likely it can easily be placed in remote sites without a negative impact) but any forces at or near the ground in these remote pristine areas is nothing but bad news. To consider this seriously when the water that flows from Tates Hell forest is going into what is considered one of the most pristine estuaries on the east coast is at best irresponsible. It is beyond ludicrous to think that this proposal is coming at a time when the State of Florida is asking the Supreme Court of the United States to protect the Apalachicola Bay by limiting the fresh water use some 200-300 miles upstream. Yet at the same time we are supposed to believe that landing men and helicopters in and around this same bay will have no negative impact when this is less than 20 miles upstream. Please consider your logic here.

Assurances from the military that all will be well are promises that cannot be kept as there are things that we cannot control. It will only take one mistake on refueling, one mistake on bringing in non-native species, one mistake of a crash to have an impact that could change the dynamics dramatically on this bay.

Finally please also consider the scope of what is being protected here. Tates Hell Forest was put in the public trust to protect these ecosystems and is home to several endangered species (now making a comeback). The ecosystem here is not too different from the Okefenokee Swamp in South Georgia which has now been declared a National Landmark and those who put it in the public trust and protected it from use years ago are now considered to have great foresight. But what if instead this swamp had been used differently. Tates Hell today is about half the size of the Okefenokee but will I believe one day soon viewed in the same way. An area for careful public recreation but an area we need to work to preserve not to use for commercial or military activities on any large scale. (Again this is the primary objective of the State's Forest Service).

5) Potential Human Health Consequences. This is probably frankly the least concerning other than from a stress standpoint. The stress will come from overflights, and concern about the bay and the livelihood that all depend on in this area. None of this is directly measureable but it will be there nonetheless.

In short unless enormous detail is provided this proposal should be rejected out of hand as it violates a sacred covenant between the State of Florida and its People. Protecting the ecosystems of Tates Hell Forest ultimately protects the ecosystems of the Apalachicola Bay. The State has invested a lot to protect both and this should be honored. Not just because it is the right thing to do and a promise was made to the citizens of Florida when land was purchased but also because this is what preservation is all about. As the military considers closing down bases and retiring old areas perhaps this is where it

should focus in terms of training rather than extending its reach into "one of pristine estuaries on the east coast". Just as the military is trying to protect and defend the people of the United States so are people of this area trying to protect the natural ecosystem so that future generations will be able to enjoy it as well.
Respectfully submitted,
Doug Carter, St George Island Florida

From: Mary Christmas [mailto: Sent: Friday, August 30, 2013 1:26 PM To: Spaits, Mike GS12 USAF AFMC 96 TW/PA

Subject: Tate's Hell.

I just want to ask you to please don't use Tate's Hell for your range. You have a lot of other places that is not being used to drop your shells. Please don't use this place. My brother cleared some land in there to make a nature trail, why on earth would you want to tear that beauty up. Please reconsider you choice of places. This place me a lot to a lot of people and there are other places that are not a place of pleasure. Please reconsider. Thank you.

Scoping Written Comment Form

ENVIRONMENTAL IMPACT STATEMENT

U.S. AIR FORCE PROPOSAL FOR THE GULF REGIONAL AIRSPACE STRATEGIC INITIATIVE (GRASI) LANDSCAPE INITIATIVE (GLI)

Please submit scoping comments to the address below or via the GRASI Landscape Initiative EIS website (grasieis.leidoseemg.com) by September 12, 2013.

Location:	Please print legibly	Date:
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No, do not includ	e my name and address on the m	ailing list.
	Please mail this form to:	

Mr. Mike Spaits, Eglin AFB Public Affairs Office, 96 TW/PA 101 West D Avenue, Room 238, Eglin AFB, FL 32542-5499

or scan and email to: spaitsm@eglin.af.mil

----Original Message--From: Suzi Cooper [mailto: Sent: Friday, August 30, 2013 6:03 PM To: Spaits, Mike GS12 USAF AFMC 96 TW/PA; suzi Subject: Tates hell WHY DO YOU WANT TO MESS UP SUCH BEAUTIFUL LAND? WE GO DITCH FISHING UP IN THEM WOODS EVERY YEAR. STAY IN YOUR OWN NEIGHBORHOOD AND AND LEAVE OURS ALONE.OUR CHILDREN FISH THERE AND HAS SINCE THEY WERE BIG ENOUGH TO STAND.WE SPENT MANY A DAY UP THERE FISHING AND HAVE A BLAST DOING IT. WE ARE OUT OF TOWN AWAY FROM THE TRAFFIC, NOISE, IN GODS CREATION. WE HAVE CAUGHT A MANY FISH THERE AND PLAN TO CATCH MANY MORE IF YOU WILL LEAVE US ALONE. BUY PROPERTY SOMEWHERE ELSE GO TOWARD WEWA. Scooper

Les Hassel Excursions

Experience the trails of North Florida "go with Les Hassel" Lesley Cox, Certified Green Guide

September 3, 2013

Eglin AFB Public Affairs ATTN: Michael Spaits 101 West D Avenue, Room 238 Eglin AFB, FL 32542-5499

PH: 850.882.2836

e-mail:

Re: GRASI Landscape Initiative Environmental Impact Statement:

Dear Mr. Spaits,

Please accept this letter for the "No Action Alternative." Tate's Hell State Forest was acquired using tax-payer funds for the restoration and preservation of Apalachicola Bay. The management plan for the forest does not include military training, but does include the following:

To restore, maintain, and protect all native ecosystems;

- To ensure the long term viability of populations and species considered rare, endangered, threatened, or of special concern;
- To integrate human use through a total resource concept, not emphasizing any particular use over the others, or over restoration, maintenance and protection of native ecosystems;
- · To protect known archeological and historical resources; and
- To practice sustainable forest management utilizing sound silvicultural techniques.

As a nature-based business owner, I depend on the accessibility and viability of Tate's Hell State Forest for hiking and driving tours to view endangered plants or birding opportunities. There are 29 surface water drainage basins in the forest and many of them contain high quality natural areas with endangered plant and animal species. Ground and air maneuvering military training in Tate's Hell State Forest is an incompatible use that would negatively impact nature-based businesses that are trying to develop tourism opportunities in a rural county of critical economic concern. Military usage of the forest may increase additional impacts from training exercises on hunting and fishing.

I am concerned that maneuvering areas may suffer significant ecological effects on both terrestrial and aquatic ecosystems.

Sincerely

Lesley Cox

Scoping Written Comment Form

ENVIRONMENTAL IMPACT STATEMENT

U.S. AIR FORCE PROPOSAL FOR THE GULF REGIONAL AIRSPACE STRATEGIC INITIATIVE (GRASI) LANDSCAPE INITIATIVE (GLI)

Please submit scoping comments to the address below or via the GRASI Landscape Initiative EIS website (grasieis.leidoseemg.com) by September 12, 2013.

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	or scan and email to: spaitsm@eglin.af.mil	

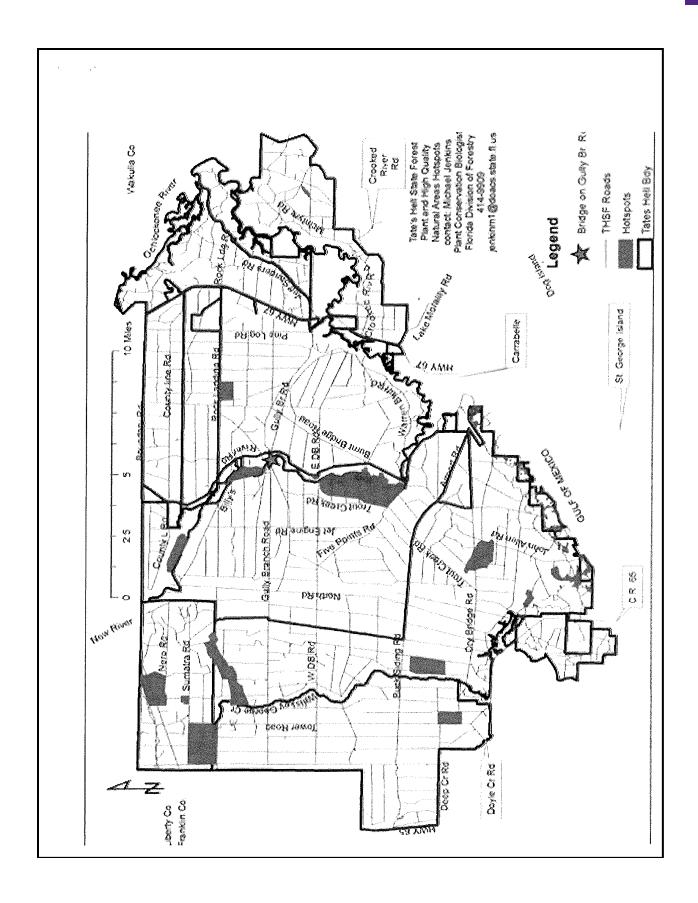


Tate's Hell State Forest



Natural Areas

INVENTORY SCIENTIFIC NAME	COMMON NAME	Global rank	State rank	Federal status	State status
AMPHIBIANS					
Ambystoma cingulalum	Frosted Flatwoods Salamander	G2	S.2	LT	FT
REPTILES					
Alligator mississipplensis	American Alligator	G5	S4	SAT	FT(S/A
Drymarchon couperi	Eastern Indigo Snake	G3	S 3	LT	FT
Gophenus polyphenius	Gopher Torloise	G3	\$3	C	ST
Lampropellis getula	Common Kingsnake	G5	\$2\$3	N	N
Pseudemys concinna suvauniensis	Suwannee Cooter	G5T3	S3	M	SSC
BIRDS					
Egretta caerulea	Little Blue Heron	G5	S4	N	SSC
Egretta thula	Snowy Egret	G5	S 3	N	SSC
Elanoides forficatus	Swallow-tailed Kite	G5	S2	N	N
Haliaeetus leucocephalus	Bald Eagle	G5	S 3	N	N
Pandion haliaetus	Osprey	G5	\$3\$4	N	SSC°
Peucaea aestivalis	Bachman's Sparrow	G3	S3	N	N
Picoldes borealls	Red-cockaded Woodpecker	G3	\$2	LE	FE
MAMMALS					
Sciurus niger niger	Southeastern Fox Squirrel	G5T5	S 3	N	N
Ursus americanus floridanus	Florida Black Bear	G5T2	S2	N	sr,
PLANTS AND LICHENS					
Andropogon arctatus	Pine-woods Bluestem	G3	\$3	N	LT
Asclepias viridula	Southern Milkweed	G2	52	N	LT
Drosera intermedia	Spoon-leaved Sundew	G5	83	N	LT
Gentiana pennelliana	Wiregrass Gentian	G3	83	N	LE
Hymenocallis henryae	Panhandle Spiderilly	G2	82	N	LE
llex amelanchier	Serviceberry Holly	G4	S 2	N	LT
Justicia crassifolia	Thick-leaved Water-willow	G3	S 3	N	LE
Liatris provincialis	Godfrey's Blazing Star	Ģ2	S2	N	LE
Linum westii	West's Flax	G2	\$2	N	LE
Lupinus weslianus	Gulf Coast Lupine	G3	\$3	N	LT
Lythrum curtissii	Curtiss' Loosestrife	G1	S1	N	LE
Machidea alba	White Birds-in-a-nest	G2	\$2	LT	LE
Myriophyllum təxum	Piedmont Water Milfoil	G3	S 3	N	N
Nolina atopocarpa	Florida Beargrass	G3	\$3	N	LT
Nyssa ursina	Bog Tupelo	G2	S2	N	N
Phoebanthus tenuifolius	Narrow-leaved Phoebanthus	G3	\$3	N	LT
Physoslegia godireyi	Apalachicola Dragon-head	G3	S 3	N	LT
Pinguicula ionantha	Godfrey's Butterwort	G2	\$2	LT	LE
Platanthera integra	Yellow Fringeless Orchid	G3G4	\$3	N	LE
Polygonella macrophylla	Large-leaved Jointweed	G3	\$3	N	LT
Rhexia parvillora	Small-flowered Meadowbeauty	G2	\$2	N	LE
Ruellia noctiflora	Nightflowering Wild Petunia	G2	S2	N	ĹĒ
Sarracenia leucophylla	White-top Pitcherplant	G3	\$3	N	LE
Scutellaria floridana	Florida Skullcap	G2	S2	LT	LE



Scoping Written Comment Form

ENVIRONMENTAL IMPACT STATEMENT

U.S. AIR FORCE PROPOSAL FOR THE GULF REGIONAL AIRSPACE STRATEGIC INITIATIVE (GRASI) LANDSCAPE INITIATIVE (GLI)

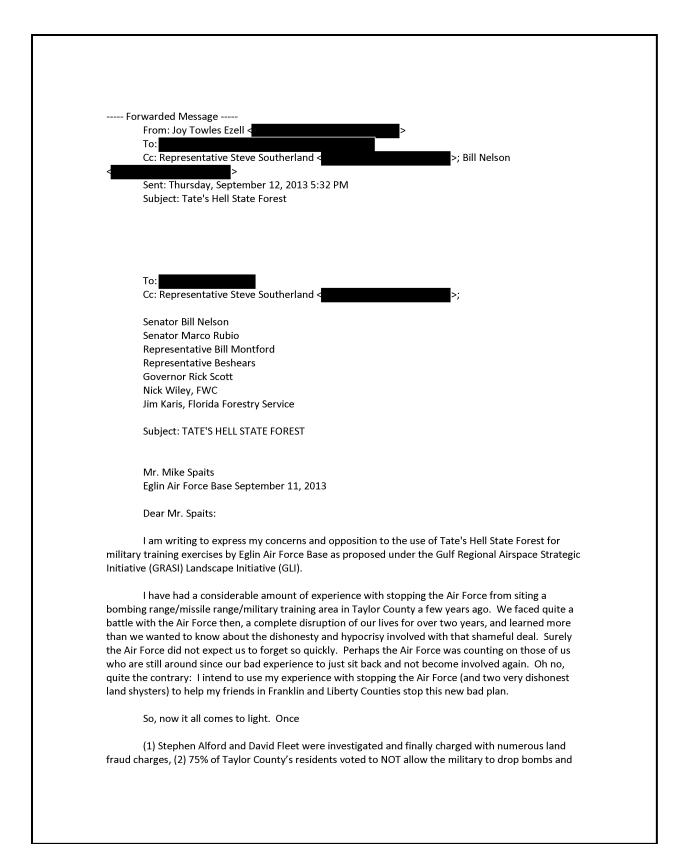
Please submit scoping comments to the address below or via the GRASI Landscape

Please print legibly Date: 9-10-20 LIVE ON and AM A FULL-TIME YEAR ROUND RES ALSO ANGRY THAT TATE'S HELL STATE FOREST IS BEING PROF FOR USE AS A MILITARY TRAINING GROUND. ALL PLANTS, WE NATER, INSECTS BIRDS, WHOD MAMMALS AND THEIR hechitat WILL. REGATIVELY IMPACTED BY MILITARY TRAINING IN THE Fragile OF TATE'S HELL STATE FOREST. THERE WILL BE FUEL EXHAUS AND NOISE FROM LOW-FLYING MELICOPTERS DISTUPTING THE LIF OF THE WILLIEF - ESPECIALLY THE MORE SPACE> CONTINUED ON B dividual respondents may request confidentiality. If you wish to withhold your name or address from public review or from disclosed of the extent allowed by law. All submissions from organizations or businesses, and from individuals or officials represent yanizations or businesses, will be made available for public inspection in their entirety. Name: BETTY CUMMINS
I AM NOT ONLY CONCERNED ALSO ANERY THAT TATE'S HELL STATE FOREST IS BEING PROFFOR USE AS A MILITARY TRAINING GROUND. ALL PLANTS, WE WATER, INSECTS BIRDS, WHOD MAMMALS, AND THEIR habitat will. REGALIVELY IMPACTED BY MILITARY TRAMPLING IN the fragile of TATE'S HELL STATE FOREST. THERE will BE FUEL EXHAUS AND NOISE FROM LOW FLYING MELICOPTERS DISTUPPING THE LIFT CONTINUE ON BACK FOR MORE SPACE " CONTINUED ON BACK FOR MORE SPACE OF CONTINUED ON BACK FOR MORE SPACE OF CONTINUED ON BACK FOR MORE SPACE OF CONTINUED ON BIRDS AND SINGLED ON BOTTOM OF THE PRESENCE OF THE PRESE
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Organization:
Address:
City/State/Zip:
Yes, include my name and address on the mailing list so I can recei
information on the GRASI Landscape Initiative EIS.
No, do not include my name and address on the mailing list.
Please mail this form to:
Mr. Mike Spaits, Eglin AFB Public Affairs Office, 96 TW/PA
101 West D Avenue, Room 238, Eglin AFB, FL 32542-5499
or scan and email to:

spaitsm@eglin.af.mil

Continuation Page

with hunt and feed at night when the majority of nearby who will be subjected to aircraft peacel training adjacent to residential areas will negatively estate values of people who boug to the military USE of AIRSPACE private Pilots needing Cimits on take off and LAND AT OUR SMALL LOCAL AIRPORTS. THE PROPOSED EMITTERS THE MILITARY INTENDS TO PRIVATE PILOT COMMUNICATION DEVICES. THE RADAR EMITTERS MAY ALSO HAVE NEGATIVE HEALTH CONSEQUENCES FOR ANIMALS AND BIRDS AS WELL AS PEOPLE WHO LIVE NEARBY. hydrological CONSIDERATIONS BECAUSE THE WATERS FROM TATE'S HELL APALACHEE BAY AND ANY CONTAMINATION of HOSEWATERS FUEL EMISSIONS OF ACCIDENTS WOULD BE DEVASTATING TO AT Risk By military training VARE AND ENDAPGERED WILDLIFE Such AS NESTING BALD EAGLES POPULATIONS IN FLORIDA SHOWLD NOT BE PU being DAMAGED OR DESTROYED BY MILITARY TRAING OR ACCIDENTS THAT MAYOCCUP DUFING SUCH MILITARY USAGE. 15 PART OF THE GREAT FLORIDA TATE'S HELL BIRDING TRAIL AND PUBLIC FUNDS WERE USED TO CONSERVE AND PROTECT THIS LAND FROM DEVELOPMENT FOR THE ENjoyMENT of birdWATCHERS, PHOTOGRAPHERS, Thank you for your input. HUNTERS, FISHERMEN AND LOCAL RESIDENT'S WHO DEPEND ON THE BOUNTY OF TATES HELL TO FEED THEIR FAMILIES AS THEY HAVE TRADITIONALLY DONE FOR GENERATIONS. THE MILITARY SHOULD RESPECT THIS AND STAY OUT OF TATE'S HELL. SIXERELY, Betty CUMMUNE



shoot missiles over our homes, and (3) our Taylor County Commissioners wisely decided to write an ordinance against allowing any military training facility to exist in our front and back yards,

the Air Force immediately quietly started planning to move the "problems" being encountered over at Eglin AFB (the noise, the contamination, the air space dangers, the loud complaining of the neighbors, etc.) over to Franklin County.... to a less populated area, with uneducated, defenseless people (similar to what you mistakenly thought we were in Taylor County) who wouldn't be able or prepared to defend their county from the Air Force's desires. You guys need to wake up from your day dreaming and realize that country folks will definitely defend their homes and property, and in no uncertain terms.

After having such a bad experience here, it became very evident to us that not all of the guilty culprits involved in the Taylor County bombing range fiasco, who SHOULD HAVE gone off to federal prison with Alford and Fleet, were investigated, questioned, and charged. Among those should have been Colonel Nolan, who was obviously very involved in the dirty deal (and who was later rewarded for his efforts in the deal by getting a promotion and being moved to Washington, DC), two of our Taylor county commissioners, three local Taylor County businessmen, at least two attorneys, one local forester, and two Congressmen. It's handy to be able to hide behind "national security" to convince a federal judge to close trials to the public and news interests, and then to seal the trial records! I haven't forgotten any of it and still have all the records! saved concerning the land swap, the land deal, the dishonesty, and the blatant lies that Colonel Nolan and other Air Force personnel told us. I learned to not trust you guys.

So, that being said, how long before you spring your real, long-term intentions on the people of Franklin County? How long before we all find out about the land deal in the works? How long before we find out who will benefit financially from this ill-planned proposal? Which shysters are behind this proposal? What developers in the Pensacola area want lucrative parts of the Eglin bombing range? And what promises have they made, and to whom? We are not nearly as naïve as we were before our previous Air Force experience. We know more questions to ask this time, and we are already very short on trust.

The military already has over 20 million acres to conduct training activities on in this country. You already have nearly half a million acres in the Eglin bombing range area. It's already there for you; use it. I'm sorry for the folks in the Pensacola area who are probably shell-shocked from the bombs, can't sleep from the constant air traffic, and are generally irritated with the noise and contamination. I would advise folks to not move there.

But none of those reasons gives the Air Force or any other arm of the military permission to stealthily take even more land for any kind of training area. You already have plenty. The air space is already yours; stop whining.

- I happen to know that the original purpose for converting the Tate's Hell tract from county property to state-owned forest was CONSERVATION:
 - (1) for hydrological protection and restoration of Apalachicola Bay,
- (2) to conserve many rare and endangered habitats and species of flora and fauna found within the fragile Tate's Hell State Forest environment,

and

(3) to preserve traditional and recreational uses of the land by the citizens whose tax monies were used for establishing this State Forest.

The creation of Tate's Hell State Forest through the use of public funds was supported by Franklin County government and residents to protect and conserve the land for public and environmental benefits, and NOT for any usurping of those benefits by the military. There are serious consequences associated with the GRASI proposal and the following concerns must be considered. All plants, wetlands, water, insects, birds and wildlife would be severely impacted by the fuel exhaust of the low-flying (tree level) helicopters. That water flows into the already dying Apalachicola Bay. The noise alone from these planes, helicopters and training exercises would devastate all birds and wildlife, as well as create untold problems for citizens living anywhere near that vicinity. The life cycles of nocturnally foraging animals would be disrupted by holding military training exercises primarily at night.

The airspace used by private pilots to land at our local airports would be compromised by giving priority for the use of that same airspace to military aircraft. Any military radar emitters installed within

Franklin County have the potential to disrupt civilian and private pilot communication devices and may even have health consequences for citizens who live nearby. Many of the residents of Franklin County depend on the bounty Tate's Hell State Forest provides through hunting and fishing

to feed their families in this economically disadvantaged community. The unique ecology found within Tate's Hell State Forest such as the Dwarf Cypress Swamp and over 90 species of rare and endangered wildlife

(such as the Red-Cockaded Woodpecker) would be at risk of being damaged or destroyed by military training exercises and/or accidents that may occur during such military usage.

Tate's Hell State Forest has one of the largest Black Bear populations in Florida, as well as a very large population of nesting American Bald Eagles. Tate's Hell is also part of the Great Florida Birding Trail and

is visited by birdwatchers, photographers, nature lovers, hunters, fishermen, local residents and tourists from far away. Lastly, during the Scoping Meetings, the public was not even allowed to ask questions;

any questions asked were ignored. That's the same tactics used in Taylor County; it won't work this time.

Furthermore, during the scoping meeting for GRASI, the military representatives said that the military wants to use Tate's Hell State Forest to make it more convenient for scheduling training exercises that are currently being held at Eglin AFB. Putting the fragile state forest environment at risk in order to make scheduling more convenient is not a compelling justification for moving "robust" exercises from Eglin training grounds to Tate's Hell State Forest. During the scoping meeting, the military also stated that one of the decisions that they might make would be to choose the "No Action Alternative" which would require that "Proposed training activities would continue to occur on Eglin AFB; Black River State Forest and Tate's Hell State Forest would not be utilized and No new emitter sites would be established." I insist that the military decision makers choose the "No Action Alternative".

The Nature Coast is our environmental tourism mecca and our economic underpinning.

For all of these reasons, I am resolutely opposed to the use of Tate's Hell State Forest for military training exercises.	
Sincerely,	
Joy Towles Ezell	

FRANKLIN COUNTY

REPLY TO 🗇

Board of County Commissioners 33 Market Street, Suite 203 Apalachicola, Fl 32320 (850) 653-8861, Ext. 100 Fax (850) 653-4795



REPLY TO

Planning & Building Dept. 34 Forbes Street Apalachicola, Fl 32320 (850) 653-9783 Fax (850) 653-9799

Mr. Mike Spaits
Eglin AFB Public Affairs Office
96 TW/PA 101 West D Avenue, Room 238
Eglin AFB, FL 32452-5499

August 5, 2013

Re: Eglins GRASI EIS Scoping Period: Request for an extension of the Public Comment Period for a total of 90 days.

Dear Mr. Spaits:

The Franklin County Board of County Commissioners has unanimously opposed the inclusion of Tate's Hell Forest in GRASI. A copy of the Board letter to Florida's federal legislative delegation is attached. The purpose of this letter, however, is to ask for the public comment to be extended so that more concerned parties can submit comments.

There are a multitude of reasons why the comment period should be extended, and they include:

- *The public meeting was not widely advertised.
- *The public comment period included a holiday week/weekend where many were preoccupied with family matters.
- *Federal public comment periods vary, but they are usually for 30, 60, or 90 days. Given the complexity and possible implications of air force activities, 30 days seems unreasonably short.
- *The GRASI EIS impact on a national treasure is a highly complex matter and the details of the proposed Air Force activities area very vague.

If you need additional information please contact Mr. Alan Pierce, Director of Administrative Services.

Sincerely.

Cheryl Sanders, Chairman Franklin County Board of County Commissioners

Cc: Senator Nelson Senator Rubio Congressman Southerland

PINKI JACKEL District One CHERYL SANDERS
District Two

NOAH LOCKLEY, JR. District Three JOSEPH PARRISH District Four WILLIAM MASSEY
District Five

Scoping Written Comment Form

ENVIRONMENTAL IMPACT STATEMENT

U.S. AIR FORCE PROPOSAL FOR THE GULF REGIONAL AIRSPACE STRATEGIC INITIATIVE (GRASI) LANDSCAPE INITIATIVE (GLI)

Please submit scoping comments to the address below or via the GRASI Landscape Initiative EIS website (grasieis.leidoseemg.com) by September 12, 2013.

rorest
Location: Backwater B. State Please print legibly Date: 9/11/2013
Speculating on the Environmental impacts of the activities
described would be relatively meaningless us, thout knowing the
frequency and duration of specific activities, the locations of the
activities, and the number of personnel and the types and amount
to equipment involved
I have the following concerns that I would like to see
addressed in the EIS.
Impacts on inholders,
Impacts on forestry activities including prescribed lowns thinning,
**** CONTINUE ON BACK FOR MORE SPACE ****
ndividual respondents may request confidentiality. If you wish to withhold your name or address from public review or from disclosure inder the Freedom of Information Act (FOIA), you must state this prominently at the beginning of your comments. Such requests will be onored to the extent allowed by law. All submissions from organizations or businesses, and from individuals or officials representing rganizations or businesses, will be made available for public inspection in their entirety.
Name: Larry Goodman
Organization:
Address:

City/State/Zip:

- Yes, include my name and address on the mailing list so I can receive information on the GRASI Landscape Initiative EIS.
- No, do not include my name and address on the mailing list.

Please mail this form to:

Mr. Mike Spaits, Eglin AFB Public Affairs Office, 96 TW/PA 101 West D Avenue, Room 238, Eglin AFB, FL 32542-5499

or scan and email to: spaitsm@eglin.af.mil

timber sales, and narrosting	
Impacts on more, threatened, and endangered species	8
plants and animals.	
Impacts on wetlands and water bodies.	
Impacts to recreational users of the forest inclu	
hikers, campers, equestrians, wildlife watchers, can	erist
tubors, valtors, hunters, photographers.	
Impacts on non-threatened or non-endangered and	male
particularly from noise due to low-level flights	11.
Description of partiers of the forest that wou	nlg p
exempt from ERAST activities, it any.	1 72
Adescription of the Scope (frequency, duration, etc.) of in	grigo
Thanks,	
harry	
the state of the s	
Thank you for your input.	
hank you for your input	



September 8, 2013

Mike Spaits at

Dear Mr. Spaits

August 29th, the US Air Force held a scoping meeting in Apalachicola about the Gulf Regional Airspace Strategic Initiative (GRASI) Landscape Initiative (GLI). The purpose of this initiative is to expand military training activities from Eglin and Tyndall Air Force Bases in to Tate's Hell State Forest and Apalachicola National Forest.

We wholeheartedly support our military, however, the proposed training would be more intense than we have experienced in the past. Any increase in air traffic would negatively impact our tourism industry. Currently, we host tourists from around the world seeking to view the unique flora and fauna in Tate's Hell Forest. Tourism is a vital aspect of our economy and it is predicated on our pristine, quiet, wild natural areas.

Apalachicola Bay and the surrounding lands have been preserved for decades to ensure the long term health of Apalachicola Bay and to conserve many rare and endangered habitats and species found within the fragile Tate's Hell environment. We have preserved these lands in lieu of receiving the economic benefits of development. This decade we are finally realizing the economic benefits of our preservation efforts. The Apalachicola Bay Chamber of Commerce and its 400+ members oppose any increase in air traffic over the area and any training that would negatively impact the solitude and wildlife in the area. Please advise us on how to engage in further discussions on this issue. I can be reach at

Sincerely.

Anita Grove Executive Director

Cc:

Senator Bill Nelson Senator Marco Rubio Congressman Steve Southerland Senator Bill Montford Rep Halsey Beshears Mike Penland US Air Force Nick Wiley, FWC Jim Karis, Florida Forestry Service ----Original Message---

From: Ron Harper [mailto]

Sent: Thursday, September 12, 2013 10:49 AM

To: Spaits, Mike GS12 USAF AFMC 96 TW/PA

Subject: GRASI Tate's & Blackwater State Forwess

I'm writing to voice my opposition to the use of Tate's Hell State Forest and Blackwater State Forest by the Air Force for any type of military training exercises. As a Veteran, I am a supporter of our military and understand the importance of training for any and all possibilities they may encounter in the field.

It's the choice of Tate's Hell SF and Blackwater SF as training sites that is the problem. I am licensed Coast Guard Captain and a Florida Master Naturalist and in the coarse of my vocations I take individuals and groups fishing, on photographic expeditions and birding. With over 100 rare & endangered species in Tate's Hell & Blackwaterfor, there is ample opportunities, both for photography or in many cases just to observe the wildlife and plant life so unique to this area. Much of the time is also spent reinforcing the need to restore the hydrology of Tate's Hell and the interaction of Tate's Hell with Apalachicola Bay and the importance of restoring the natural habitat of the area. You are never without things to see and discuss, be it rare orchids, carnivorous plants, endangered birds such as the red cockaded woodpeckers, migrating butterflies or foraging black bears.

With the amount of available land in north Florida, I can not grasp the thinking or logic in selecting two of the most diverse and ecologically sensitive area in the Panhandle, if not in the entire state. This land was primarily acquired with public money, with the intent to restore and preserve for future generations. I'm sure St. Joe has thousands of suitable acres that they glad would lease to the Air Force.

I attended the Apalachicola scoping meeting and asked why these area where chosen, when the AF already controlled 500,000 acres in the Panhandle and was simply told that was "all used up" and these tracts were the "right distance" from Eglin. Questions I also asked, but received no answer:

How many years is the AF planning on using the land?

How many days annually?
Longest continuous period of usage?
Maximum number personnel, vehicles and temporary structures?
No permanent structuresright?
Maximum acres utilized?
Only military personnel?
No subcontractors?
Can not be "sublet" to anyone else
No road closures?
No closed areas?
What's in it for us and our land? What are we getting in return?
It appears the planning was very poor in selecting these two areas and I don't feel my tax dollars were wisely spent. I would love to see the impact statement pertaining to this plan, if there was one. Let's rethink this whole thing and find an alternative site/sites that that are not as ecologically sensitive and are not public lands acquired with public money.
Do the right thing!
Ron Harper





Natural Areas	Tate of Field State Fore			1	1851
SCIENTIFIC NAME	COMMON NAME	Global rank	State rank	Federal status	State
	Comment thema	1,4,1,4,1	74.74	Ottatao	Cutuc
AMPHIBIANS	American Advances			No.	
Ambystoma cingulatum	Frosted Flatwoods Salamander	G2	S2	LT	FT
REPTILES					
Alligator mississippiensis	American Alligator	G5	S4	SAT	FT(S/
Drymarchon couperi	Eastern Indigo Snake	G3	S3	LT	FT
Gopherus polyphemus	Gopher Tortoise	G3	S3	C	ST
Lampropeltis getula	Common Kingsnake	G5	S2S3	N	N
Pseudemys concinna suwanniensis	Suwannee Cooter	G5T3	S3	N	SSC
BIRDS					
Egretta caerulea	Little Blue Heron	G5	S4	N	SSC
Egretta thula	Snowy Egret	G5	S3	N	SSC
Elanoides forficatus	Swallow-tailed Kite	G5	S2	N	N
Haliaeetus leucocephalus	Bald Eagle	G5	S3	N	N
Pandion haliaetus	Osprey	G5	S3S4	N	SSC*
Peucaea aestivalis	Bachman's Sparrow	G3	S3	N	N
Picoides borealis	Red-cockaded Woodpecker	G3	S2	LE	FE
MAMMALS					
Sciurus niger niger	Southeastern Fox Squirrel	G5T5	S3	N	N
Ursus americanus floridanus	Florida Black Bear	G5T2	S2	N	ST*
PLANTS AND LICHENS					
Andropogon arctatus	Pine-woods Bluestem	G3	S3	N	LT
Asclepias viridula	Southern Milkweed	G2	S2	N	LT
Drosera intermedia	Spoon-leaved Sundew	G5	S3	N	LT
Gentiana pennelliana	Wiregrass Gentian	G3	S3	N.	LE
Hymenocallis henryae	Panhandle Spiderlily	G2	S2	N	LE
Ilex amelanchier	Serviceberry Holly	G4	S2	N	LT
Justicia crassifolia	Thick-leaved Water-willow	G3	S3	N	LE
Liatris provincialis	Godfrey's Blazing Star	G2	S2	N	LE
Linum westii	West's Flax	G2	S2	N	LE
Lupinus westianus	Gulf Coast Lupine	G3	S3	N	LT
Lythrum curtissii	Curtiss' Loosestrife	G1	S1	N	LE
Macbridea alba	White Birds-in-a-nest	G2	S2	LT	LE
Myriophyllum laxum	Piedmont Water Milfoil	G3	S3	N.	N
Nolina atopocarpa	Florida Beargrass	G3	S3	N	LT
Nyssa ursina	Bog Tupelo	G2	S2	N	N
Phoebanthus tenuifolius	Narrow-leaved Phoebanthus	G3	S3	N	LT
Physostegia godfreyi	Apalachicola Dragon-head	G3	S3	N	LT
Pinguicula ionantha	Godfrey's Butterwort	G2	S2	LT.	LE
Platanthera integra	Yellow Fringeless Orchid	G3G4	S3	N	LE
Polygonella macrophylla	Large-leaved Jointweed	G3	S3	N	LT
Rhexia parviflora	Small-flowered Meadowbeauty	G2	S2	N	LE
Ruellia noctiflora	Nightflowering Wild Petunia	G2	S2	N	LE
Sarracenia leucophylla	White-top Pitcherplant	G3	S3	N	LE
Scutellaria floridana	Florida Skullcap	G2	S2	LT	LE

Note: Summary includes all documented and likely species occurrence records currently in the FNAI database.

08/28/2013

Page 1 of 4





Natural Areas

COMMON NAME

Global :

State Federa

Federal State status

Using a ranking system developed by NatureServe and the Natural Heritage Program Network, the Florida Natural Areas Inventory assigns two ranks for each element. The global rank is based on an element's worldwide status; the state rank is based on the status of the element in Florida. Element ranks are based on many factors, the most important ones being estimated number of Element Occurrences (EOs), estimated abundance (number of individuals for species; area for natural communities), geographic range, estimated number of adequately protected EOs, relative threat of destruction, and ecological fragility.

FNAI GLOBAL ELEMENT RANK

- G1 = Critically imperiled globally because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.
- G2 = Imperiled globally because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.
- G3 = Either very rare and local throughout its range (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction from other factors.
- G4 = Apparently secure globally (may be rare in parts of range).
- G5 = Demonstrably secure globally.
- GH = Of historical occurrence throughout its range, may be rediscovered (e.g., ivory-billed woodpecker).
- GX = Believed to be extinct throughout range.
- GXC = Extirpated from the wild but still known from captivity or cultivation.
- G#? = Tentative rank (e.g., G2?).
- G#G# = Range of rank; insufficient data to assign specific global rank (e.g., G2G3).
- G#T# = Rank of a taxonomic subgroup such as a subspecies or variety; the G portion of the rank refers to the entire species and the T portion refers to the specific subgroup; numbers have same definition as above (e.g., G3T1).
- G#Q = Rank of questionable species ranked as species but questionable whether it is species or subspecies; numbers have same definition as above (e.g., G2Q).
- G#T#Q = Same as above, but validity as subspecies or variety is questioned.
- GU = Unrankable; due to a lack of information no rank or range can be assigned (e.g., GUT2).
- GNA = Ranking is not applicable because the element is not a suitable target for conservation (e.g. a hybrid species).
- GNR = Element not yet ranked (temporary).
- GNRTNR = Neither the element nor the taxonomic subgroup has yet been ranked.

FNAI STATE ELEMENT RANK

- S1 = Critically imperiled in Florida because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.
- S2 = Imperiled in Florida because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.
- S3 = Either very rare and local in Florida (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction from other factors.
- S4 = Apparently secure in Florida (may be rare in parts of range).
- S5 = Demonstrably secure in Florida.
- SH = Of historical occurrence in Florida, possibly extirpated, but may be rediscovered (e.g., ivory-billed woodpecker).
- SX = Believed to be extirpated throughout Florida.
- SU = Unrankable; due to a lack of information no rank or range can be assigned.
- SNA = State ranking is not applicable because the element is not a suitable target for conservation (e.g. a hybrid species).
- SNR = Element not yet ranked (temporary).

FEDERAL LEGAL STATUS

Note: Summary includes all documented and likely species occurrence records currently in the FNAI database.

08/28/2013

Page 2 of 4





Legal status information provided by FNAI for information only. For official definitions and lists of protected species, consult the relevant federal agency.

Definitions derived from U.S. Endangered Species Act of 1973, Sec. 3. Note that the federal status given by FNAI refers only to Florida populations and that federal status may differ elsewhere.

- C = Candidate species for which federal listing agencies have sufficient information on biological vulnerability and threats to support proposing to list the species as Endangered or Threatened.
- LE = Endangered: species in danger of extinction throughout all or a significant portion of its range
- LE, LT = Species currently listed endangered in a portion of its range but only listed as threatened in other areas.
- LE, PDL = Species currently listed endangered but has been proposed for delisting.
- LE, PT = Species currently listed endangered but has been proposed for listing as threatened.
- LE, XN = Species currently listed endangered but tracked population is a non-essential experimental population.
- LT = Threatened: species likely to become Endangered within the foreseeable future throughout all or a significant portion of its range. SAT = Treated as threatened due to similarity of appearance to a species which is federally listed such that enforcement personnel have difficulty in attempting to differentiate between the listed and unlisted species.
- SC = Not currently listed, but considered a "species of concern" to USFWS.

STATE LEGAL STATUS

Provided by FNAI for information only. For official definitions and lists of protected species, consult the relevant state agency.

Animals: Definitions derived from "Florida's Endangered Species and Species of Special Concern, Official Lists" published by Florida Fish and Wildlife Conservation Commission, 1 August 1997, and subsequent updates.

- FE = Listed as Endangered Species at the Federal level by the U. S. Fish and Wildlife Service
- FT = Listed as Threatened Species at the Federal level by the U.S. Fish and Wildlife Service
- F(XN) = Federal listed as an experimental population in Florida
- FT(S/A) = Federal Threatened due to similarity of appearance
- ST = State population listed as Threatened by the FFWCC. Defined as a species, subspecies, or isolated population which is acutely vulnerable to environmental alteration, declining in number at a rapid rate, or whose range or habitat is decreasing in area at a rapid rate and as a consequence is destined or very likely to become an endangered species within the foreseeable future. (ST* for Ursus americanus floridanus (Florida black bear) indicates that this status does not apply in Baker and Columbia counties and in the Apalachicola National Forest. ST* for Neovison vison pop.1 (Southern mink, South Florida population) indicates that this status applies to the Everglades population only.)
- SSC = Listed as Species of Special Concern by the FFWCC. Defined as a population which warrants special protection, recognition, or consideration because it has an inherent significant vulnerability to habitat modification, environmental alteration, human disturbance, or substantial human exploitation which, in the foreseeable future, may result in its becoming a threatened species. (SSC* indicates that a species has SSC status only in selected portions of its range in Florida. SSC* for Pandion haliaetus (Osprey) indicates that this status applies in Monroe county only.)
- N = Not currently listed, nor currently being considered for listing.

Plants: Definitions derived from Sections 581.011 and 581.185(2), Florida Statutes, and the Preservation of Native Flora of Florida Act, 58-40.001. FNAI does not track all state-regulated plant species; for a complete list of state-regulated plant species, call Florida Division of Plant Industry, 352-372-3505 or see: http://www.doacs.state.fl.us/pi/.

LE = Endangered: species of plants native to Florida that are in imminent danger of extinction within the state, the survival of which is unlikely if the causes of a decline in the number of plants continue; includes all species determined to be endangered or threatened pursuant

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to the U.S. Endangered Species Act.

LT = Threatened: species native to the state that are in rapid decline in the number of plants within the state, but which have not so decreased in number as to cause them to be Endangered.

N = Not currently listed, nor currently being considered for listing.

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Blackwater River State Forest



Natural Areas

Natural Areas					1001
SCIENTIFIC NAME	COMMON NAME	Global rank	State	Federal status	Statu
	COMMON NAME	tarik	Tallk	วเสเบร	Statu
FISH	Marine Alexan	24	44	20	
Lythrurus atrapiculus	Blacktip Shiner	G4	S2	N	N
AMPHIBIANS					
Ambystoma bishopi	Reticulated Flatwoods Salamander	G2	S2	LE	FE
Ambystoma tigrinum	Tiger Salamander	G5	S3	N	N
Hyla andersonii	Pine Barrens Treefrog	G4	S3	N	SSC
Rana capito	Gopher Frog	G3	S3	N	SSC
Rana okaloosae	Florida Bog Frog	G2	S2	N	SSC
REPTILES					
Agkistrodon contortrix	Copperhead	G5	S2	N	N
Apalone spinifera aspera	Gulf Coast Spiny Softshell	G5T5	S3	N	N
Crotalus adamanteus	Eastern Diamondback Rattlesnake	G4	S3	N	N
Drymarchon couperi	Eastern Indigo Snake	G3	S3	LT	FT
Gopherus polyphemus	Gopher Tortoise	G3	S3	C	ST
Heterodon simus	Southern Hognose Snake	G2	S2	N	N
Macrochelys temminckii	Alligator Snapping Turtle	G3G4	S3	N	SSC
Pituophis melanoleucus mugitus	Florida Pine Snake	G4T3	S3	N	SSC
Piluopilis melanoleucus mugitus	Florida Fille Shake	G413	33	14	330
BIRDS	San	10	do	- 10	0.0
Elanoides forficatus	Swallow-tailed Kite	G5	S2	N	N
Haliaeetus leucocephalus	Bald Eagle	G5	53	N	N
Peucaea aestivalis	Bachman's Sparrow	G3	S3	N	N
Picoides borealis	Red-cockaded Woodpecker	G3	S2	LE	FE
Picoides villosus	Hairy Woodpecker	G5	S3	N	N
MAMMALS					
Sciurus niger shermani	Sherman's Fox Squirrel	G5T3	S3	N	SSC
Tamias striatus	Eastern Chipmunk	G5	S2	N	SSC
Ursus americanus floridanus	Florida Black Bear	G5T2	S2	N	SŢ*
INVERTEBRATES					
Acroneuria evoluta	A Stonefly	G5	S1S2	N	N
Agarodes libalis	Spring-loving Psiloneuran Caddisfly	G3	S3	N	N
Agarodes ziczac	Zigzag Blackwater River Caddisfly	G2	S2	N	N
Amblyscirtes aesculapius	Lace-winged Roadside Skipper	G3G4	S3S4	N	N
Amblyscirtes alternata	Dusky Roadside-Skipper	G2G3	S1S2	N	N
Amblyscirtes reversa	Reversed Roadside-Skipper	G3G4	S1	N	N
Aphodius aegrotus	Small Pocket Gopher Aphodius Beetle	G3G4	S3?	N	N
Aphodius bakeri	Baker's Pocket Gopher Aphodius	G2G3	S2	N	N
Aphodius dyspistus	Beetle Surprising Packet Gopher Aphodius	G3G4	53?	N	N
Askadius hambaria	Beetle	00	0400		
Aphodius gambrinus	Amber Pocket Gopher Aphodius Beetle	G2	S1S2	N	N
Aphodius hubbelli	Hubbell's Pocket Gopher Aphodius Beetle	GNR	S3?	N	N

Note: Summary includes all documented and likely species occurrence records currently in the FNAI database.

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Blackwater River State Forest



Natural	Areas
INVEN	

SCIENTIFIC NAME	COMMON NAME	Global rank	State rank	Federal status	Statu statu
INVERTEBRATES (cont.)					
Aphodius laevigatus	Large Pocket Gopher Aphodius Beetle	G3G4	537	N	N
Aphodius pholetus	Rare Pocket Gopher Aphodius Beetle	G1G2	S1	N	N
Aphodius platypleurus	Broad-Sided Pocket Gopher Aphodius Beetle	G2G3	S2	N	N
Aphodius tanytarsus	Long-Clawed Pocket Gopher Aphodius Beetle	G2G3	S2S3	N	N
Atrytone arogos arogos	Arogos Skipper	G3T1T2	S1	N	N
Baetisca becki	A Mayfly	G2G3	S2	N	N
Baetisca rogersi	A Mayfly	G4	S3	N	N
Callophrys augustinus	Brown Elfin	G5	S1	N	N
Callophrys henrici	Henry's Elfin	G5	5354	N	N
Callophrys hesseli	Hessel's Hairstreak	G3G4	S2	N	N
Callophrys irus	Frosted Elfin	G3	S1	N	N
Celastrina ladon	Spring Azure	G4G5	SU	N	N
Cheumatopsyche petersi	Peters' Cheumatopsyche Caddisfly	G3	S2	N	N
Chimarra florida	Floridian Finger-net Caddisfly	G4	S3S4	N	N
Cordulegaster sayi	Say's Spiketail	G2	S2	N	N
Cupido comyntas	Eastern Tailed Blue	G5	S2	N	N
Dolania americana	American Sand-burrowing Mayfly	G4	S1S2	N	N
Dromogomphus armatus	Southeastern Spinyleg	G4	S3	N	N
Erynnis martialis	Mottled Duskywing	G3	S1	N	N
Euphoria discisollis	Pocket Gopher Flower Beetle	G2	S1S2	N	N
Gomphus geminatus	Twin-striped Clubtail	G3G4	S3	N	N
Gomphus westfalli	Diminutive Clubtail	G1G2	S1S2	N	N
Helopicus subvarians	A Stonefly	G5	S1S2	N	N
Hesperia attalus slossonae	Seminole Skipper	G3G4T3		N	N
Hesperia meskei straton	Eastern Meske's Skipper	G3G4T3	S2S3	N	N
Hexagenia bilineata	A Mayfly	G5	S2	N	N
Hydroperla phormidia	A Stonefly	G3	S2	N	N
Leuctra cottaquilla	A Stonefly	G2	52	N	N
Nymphalis antiopa	Mourning Cloak	G5	SNA	N	N
Oxyethira elerobi	Elerob's Microcaddisfly	G3G4	S2S3	N	N
Oxyethira janella	Little-entrance Oxyethiran Microcaddisfly	G5	S4S5	N	N
Oxyethira novasota	Novasota Oxyethiran Microcaddisfly	G4G5	S2	N	N
Oxyethira pescadori	Pescador's Bottle-Cased Caddisfly	G3G4	S3	N	N
Perlinella zwicki	A Stonefly	G4	S1S2	N	N
Phyllophaga ovalis	Oval June Beetle	G1G2	S1S2	N	N
Progomphus bellei	Belle's Sanddragon	G3	S3	N	N
Ptomaphagus geomysi	Elongate Pocket Gopher Ptomaphagus Beetle	G2G3	S2	N	N
Ptomaphagus schwarzi	Schwarz' Pocket Gopher Ptomaphagus Beetle	G3	S3	N	N
Satyrium kingi	King's Hairstreak	G3G4	S2	N	N
Selonodon santarosae	Santa Rosa Cebrionid Beetle	G1	S1	N	N
Stenacron floridense	A Mayfly	G3G4	S3S4	N	N

Note: Summary includes all documented and likely species occurrence records currently in the FNAI database.

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Blackwater River State Forest



Natural Areas

NACHTALFITERS					
SCIENTIFIC NAME	COMMON NAME	Global rank	State rank	Federal status	State statu
INVERTEBRATES (cont.)					
Stylurus townesi	Bronze Clubtail	G3	S1	N	N
Tallaperla comelia	Southeastern Roachfly	G4	S1	N	N
PLANTS AND LICHENS					
Agalinis georgiana	Pine Barren False-foxglove	G1	S1	N	N
Baptisia calycosa var. villosa	Hairy Wild Indigo	G3T3	S3	N	LT
Calycanthus floridus	Sweet-shrub	G5	S2	N	LE
Coelorachis tuberculosa	Piedmont Jointgrass	G3	S3	N	LT
Drosera intermedia	Spoon-leaved Sundew	G5	S3	N	LT
Epigaea repens	Trailing Arbutus	G5	S2	N	LE
Lachnocaulon digynum	Bog Button	G3	S3	N	LT
Lilium iridollae	Panhandle Lily	G2	S2	N	LE
Macranthera flammea	Hummingbird Flower	G3	S2	N	LE
Pinguicula primuliflora	Primrose-flowered Butterwort	G3G4	S3	N	LE
Platanthera clavellata	Little Club-spur Orchid	G5	S1	N	LE
Platanthera integra	Yellow Fringeless Orchid	G3G4	S3	N	LE
Pteroglossaspis ecristata	Giant Orchid	G2G3	S2	N	LT
Rhexia parviflora	Small-flowered Meadowbeauty	G2	S2	N	LE
Rhododendron austrinum	Florida Flame Azalea	G3	S3	N	LE
Rhynchospora crinipes	Hairy-peduncled Beaksedge	G2	S2	N	LE
Sarracenia leucophylla	White-top Pitcherplant	G3	S3	N	LE
Sarracenia rubra	Sweet Pitcherplant	G4	S3	N	LT
Xyris scabrifolia	Harper's Yellow-eyed Grass	G3	S3	N	LT

Note: Summary includes all documented and likely species occurrence records currently in the FNAI database.

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SCIENTIFIC NAME

COMMON NAME

Global S

State Federal

State

Using a ranking system developed by NatureServe and the Natural Heritage Program Network, the Florida Natural Areas Inventory assigns two ranks for each element. The global rank is based on an element's worldwide status; the state rank is based on the status of the element in Florida. Element ranks are based on many factors, the most important ones being estimated number of Element Occurrences (EOs), estimated abundance (number of individuals for species; area for natural communities), geographic range, estimated number of adequately protected EOs, relative threat of destruction, and ecological fragility.

FNAI GLOBAL ELEMENT RANK

- G1 = Critically imperiled globally because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.
- G2 = Imperiled globally because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.
- G3 = Either very rare and local throughout its range (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction from other factors.
- G4 = Apparently secure globally (may be rare in parts of range).
- G5 = Demonstrably secure globally.
- GH = Of historical occurrence throughout its range, may be rediscovered (e.g., ivory-billed woodpecker).
- GX = Believed to be extinct throughout range.
- GXC = Extirpated from the wild but still known from captivity or cultivation.
- G#? = Tentative rank (e.g., G2?).
- G#G# = Range of rank; insufficient data to assign specific global rank (e.g., G2G3).
- G#T# = Rank of a taxonomic subgroup such as a subspecies or variety; the G portion of the rank refers to the entire species and the T portion refers to the specific subgroup; numbers have same definition as above (e.g., G3T1).
- G#Q = Rank of questionable species ranked as species but questionable whether it is species or subspecies; numbers have same definition as above (e.g., G2Q).
- G#T#Q = Same as above, but validity as subspecies or variety is questioned.
- GU = Unrankable; due to a lack of information no rank or range can be assigned (e.g., GUT2).
- GNA = Ranking is not applicable because the element is not a suitable target for conservation (e.g. a hybrid species).
- GNR = Element not yet ranked (temporary).
- GNRTNR = Neither the element nor the taxonomic subgroup has yet been ranked.

FNAI STATE ELEMENT RANK

- S1 = Critically imperiled in Florida because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.
- S2 = Imperiled in Florida because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.
- S3 = Either very rare and local in Florida (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction from other factors.
- S4 = Apparently secure in Florida (may be rare in parts of range).
- S5 = Demonstrably secure in Florida.
- SH = Of historical occurrence in Florida, possibly extirpated, but may be rediscovered (e.g., ivory-billed woodpecker).
- SX = Believed to be extirpated throughout Florida.
- SU = Unrankable; due to a lack of information no rank or range can be assigned.
- SNA = State ranking is not applicable because the element is not a suitable target for conservation (e.g. a hybrid species).
- SNR = Element not yet ranked (temporary).

FEDERAL LEGAL STATUS

Note: Summary includes all documented and likely species occurrence records currently in the FNAI database

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Legal status information provided by FNAI for information only. For official definitions and lists of protected species, consult the relevant federal agency.

Definitions derived from U.S. Endangered Species Act of 1973, Sec. 3. Note that the federal status given by FNAI refers only to Florida populations and that federal status may differ elsewhere.

- C = Candidate species for which federal listing agencies have sufficient information on biological vulnerability and threats to support proposing to list the species as Endangered or Threatened.
- LE = Endangered: species in danger of extinction throughout all or a significant portion of its range
- LE, LT = Species currently listed endangered in a portion of its range but only listed as threatened in other areas.
- LE, PDL = Species currently listed endangered but has been proposed for delisting.
- LE, PT = Species currently listed endangered but has been proposed for listing as threatened.
- LE, XN = Species currently listed endangered but tracked population is a non-essential experimental population.
- LT = Threatened: species likely to become Endangered within the foreseeable future throughout all or a significant portion of its range.

 SAT = Treated as threatened due to similarity of appearance to a species which is federally listed such that enforcement personnel have difficulty in attempting to differentiate between the listed and unlisted species.
- SC = Not currently listed, but considered a "species of concern" to USFWS.

STATE LEGAL STATUS

Provided by FNAI for information only. For official definitions and lists of protected species, consult the relevant state agency.

Animals: Definitions derived from "Florida's Endangered Species and Species of Special Concern, Official Lists" published by Florida Fish and Wildlife Conservation Commission, 1 August 1997, and subsequent updates.

- FE = Listed as Endangered Species at the Federal level by the U. S. Fish and Wildlife Service
- FT = Listed as Threatened Species at the Federal level by the U.S. Fish and Wildlife Service
- F(XN) = Federal listed as an experimental population in Florida
- FT(S/A) = Federal Threatened due to similarity of appearance
- ST = State population listed as Threatened by the FFWCC. Defined as a species, subspecies, or isolated population which is acutely vulnerable to environmental alteration, declining in number at a rapid rate, or whose range or habital is decreasing in area at a rapid rate and as a consequence is destined or very likely to become an endangered species within the foreseeable future. (ST* for Ursus americanus floridanus (Florida black bear) indicates that this status does not apply in Baker and Columbia counties and in the Apalachicola National Forest. ST* for Neovison vison pop.1 (Southern mink, South Florida population) indicates that this status applies to the Everglades population only.)
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to the U.S. Endangered Species Act.

LT = Threatened: species native to the state that are in rapid decline in the number of plants within the state, but which have not so decreased in number as to cause them to be Endangered.

N = Not currently listed, nor currently being considered for listing.

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----Original Message---

From: Aubrey M. Heupel [mailto:

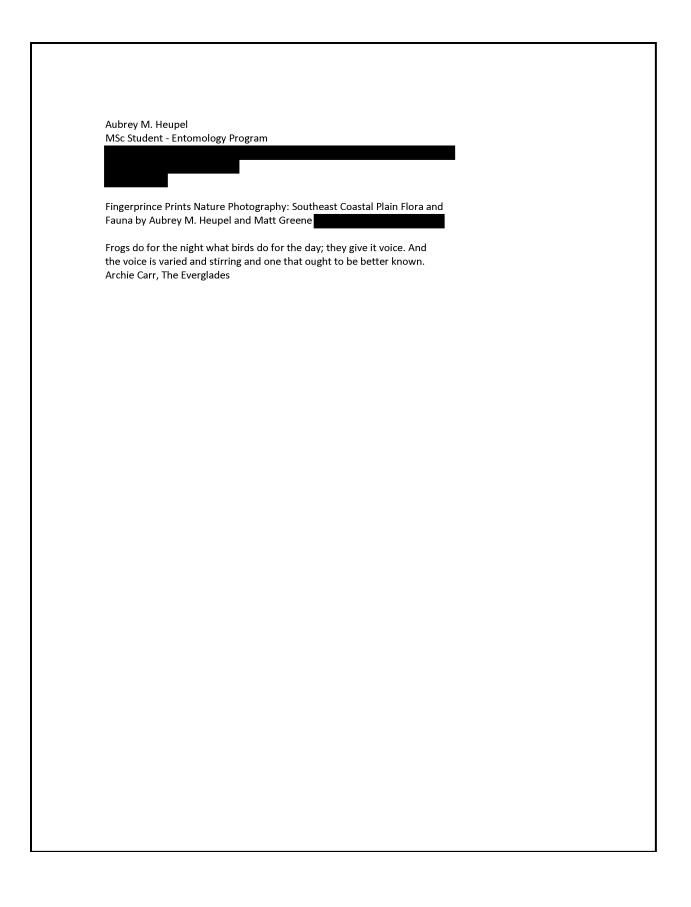
Sent: Thursday, September 12, 2013 12:12 PM To: Spaits, Mike GS12 USAF AFMC 96 TW/PA

Subject: Tate's Hell State Forest

I am writing to express my concerns and opposition to the use of Tate's Hell State Forest for military training exercises by Eglin Air Force Base as proposed under the Gulf Regional Airspace Strategic Initiative (GRASI) Landscape Initiative (GLI). The original purpose for converting the Tate's Hell tract from county property to state-owned forest was CONSERVATION: (1) for hydrological protection and restoration of Apalachicola Bay, (2) to conserve many rare and endangered habitats and species of flora and fauna found within the fragile Tate's Hell State Forest environment, and (3) to preserve traditional and recreational uses of the land by the citizens whose tax monies were used for establishing this State Forest. The creation of Tate's Hell State Forest through the use of public funds was supported by Franklin County government and residents to protect and conserve the land for public and environmental benefits, and NOT for any usurping of those benefits by the military. There are serious consequences associated with the GRASI proposal and the following concerns must be considered. All plants, wetlands, water, insects, birds and wildlife will be severely impacted by the fuel exhaust of the low-flying (tree level) helicopters. That water flows into the already dying Apalachicola Bay. The noise alone from these planes, helicopters and training exercises will devastate all birds and wildlife, as well as create untold problems for citizens living anywhere near that vicinity. The life cycles of nocturnally foraging animals will be disrupted by holding military training exercises primarily at night. The unique ecology found within Tate's Hell State Forest such as the Dwarf Cypress Swamp and over 90 species of rare and endangered wildlife (such as the Red-Cockaded Woodpecker) are at risk of being damaged or destroyed by military training exercises and/or accidents that may occur during such military usage. Tate's Hell State Forest has one of the largest Black Bear populations in Florida, as well as a very large population of nesting American Bald Eagles. Tate's Hell is also part of the Great Florida Birding Trail and is visited by birdwatchers, photographers, nature lovers, hunters, fishermen, local residents and tourists from around the world. Lastly, during the Scoping Meetings, the public was not even allowed to ask questions; any questions asked were ignored. For all of these reasons, I am resolutely opposed to the use of Tate's Hell State Forest for military training exercises.

Sincerely,

Aubrey Heupel



Scoping Written Comment Form ENVIRONMENTAL IMPACT STATEMENT

U.S. AIR FORCE PROPOSAL FOR THE GULF REGIONAL AIRSPACE STRATEGIC INITIATIVE (GRASI) LANDSCAPE INITIATIVE (GLI)

Please submit scoping comments to the address below or via the GRASI Landscape Initiative EIS website (grasieis.leidoseemg.com) by September 12, 2013.

Location:	Please print legibly	Date:
	**** CONTINUE ON BACK FOR MORE SPACE	
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Name: Hannah Hies Organization: Address: City/State/Zip: Tallah Yes, include m information on tl	law. All submissions from organizations or businesse made available for public inspection in their entirety ter assee, Florida y name and address on the made GRASI Landscape Initiative EIS. de my name and address on the m	nning of your comments. Such requests will be so, and from individuals or officials representing nailling list so I can receive alling list.

Continuation Page

Dear Gulf Regional Airspace Strategic Initiative,

I am writing to express my concerns and opposition to the use of Tate's Hell State Forest for military training exercises by Eglin Air Force Base as proposed under the Gulf Regional Airspace Strategic Initiative (GRASI) Landscape Initiative (GLI).

Tate's Hell tract was originally converted from county property to state-owned forest for conservation with three main purposes: (1) hydrological protection and restoration of Apalachicola Bay, (2) conservation of many rare and endangered habitats and species of flora and fauna found within the fragile Tate's Hell State Forest environment, and (3) preservation of traditional and recreational uses of the land by the citizens whose tax monies were used for establishing this State Forest.

The creation of Tate's Hell State Forest through the use of public funds was supported by Franklin County government and residents to protect and conserve the land for public and environmental benefits. This makes both the usurping of those benefits by the military and serious environmental consequences associated with the GRASI proposal highly disturbing. The changes in land use impinges on the local community who have decided to preserve the natural environment and, in so doing, have forgone short term gains in the interest of long term benefits and sharing their land with the public. The exercises would also deter many of the visitors, comprised of both local residents and tourists from afar, who frequent Tate's Hell State Forest. The reputation of Tate's Hell State Forest will be damaged which will also reduce income from recreation. The natural cycles and health of the flora and fauna will be severely impacted by training exercises and pollution from fuel exhaust and noise. The Dwarf Cypress Swamp and over 90 species of rare and endangered wildlife that are part of the unique ecology found within Tate's Hell State Forest are at risk of being damaged or destroyed by military training exercises and/or accidents that may occur. Furthermore, any pollution that reaches Apalachicola Bay will be detrimental to both the wildlife and those whose livelihood depends on the bay. Lastly, during the Scoping Meetings the public was not allowed to ask questions, even for clarification.

For all of these reasons, I am resolutely opposed to the use of Tate's Hell State Forest for military training exercises.

Yours sincerely,

Hannah Hiester

Thank you for your input.

----Original Message----

From: Jon Johnson [mailto:

Sent: Thursday, September 12, 2013 8:49 AM To: Spaits, Mike GS12 USAF AFMC 96 TW/PA Subject: Tate's Hell SF, Blackwater SF

I'm writing to voice my opposition to the use of Tate's Hell State Forest and Blackwater State Forest by the Air Force for any type of military training exercises. I DO support our military and understand the importance

of training for any and all possibilities they may encounter in the field.

It's the choice of Tate's Hell SF and Blackwater SF as training sites that is the problem. Now that I have retired I live adjacent to Tate's Hell SF and spend hours every week driving the forest roads pursuing my wildlife photography. I also take individuals and groups into Tate's Hell for both the photography opportunity or in many cases just to observe the wildlife and plant life so unique to this special place. There is always something to see...always something going on. In May I observed and photographed, with different groups from all over the Southeast, seven species of native orchids. Swallow-tailed Kites and a great variety of other birds were nesting from early Spring through June and even July. It was a "sure thing" in July to lead people to many areas where blackberries were just getting ripe and see Black Bears foraging. It's butterfly season now (August, September and October). Many rare, threatened and endangered plants flower this time of year. September marks the beginning of the migration to this

I have been exploring Tate's Hell since I moved to Tallahassee to attend FSU in 1965. I was born in Tampa and have lived in Florida my entire life. I have never seen anywhere in Florida with the number and variety of plants and wildlife as Tate's Hell SF. I am attaching maps from the Florida State Forest Service showing the "hot spots" of rare plant life in Tate's Hell SF as well as a map showing all the camping grounds throughout the forest as well as numerous boat ramps.

area of thousands of birds, many of which spend the Winter here.

I am also attaching lists of all the threatened, endangered and species of special concern inventoried in Tate's Hell SF and Blackwater SF.

The entire area in Tate's Hell SF is used ALL YEAR night and day by area residents as well as visitors from other states and even other countries. Camping, boating and hunting as well as excursions occur every day!

I was curious why the Air Force had chosen the two places they did when there is so much undeveloped land in the panhandle. I attended the scoping meeting in Apalachicola and asked representatives from the Eglin AFB why the two most environmentally sensitive areas in the panhandle were chosen to do this vital training. Their answer was that it was the Florida State Forest Service that had recommended these two sites.

If this is the case they sure dropped the ball on achieving their purpose of protecting our most sensitive areas.

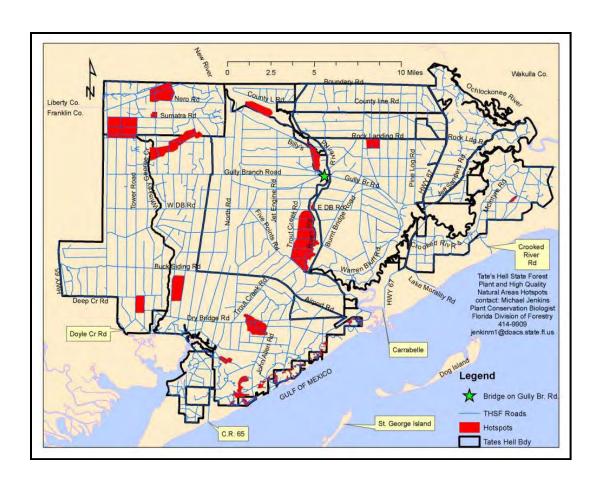
I know it will take time and expense to find two other areas in the panhandle that will meet the requirements for the training exercises but will make less impact on the rare wildlife, plants and people.

It was a big mistake to not consider the impact it would have to try to start military training of any kind in either of these state forests.

It would be a bigger mistake to continue down this path. The harm would be immense.

I'm sure there's a better place!

Jon Johnson







Blackwater River State Forest



Natural Areas

Natural Areas					1831
INVENTORY		Global	State	Federal	State
SCIENTIFIC NAME	COMMON NAME	rank	rank	status	statu
FISH					
Lythrurus atrapiculus	Blacktip Shiner	G4	S2	N	N
AMPHIBIANS					
Ambystoma bishopi	Reticulated Flatwoods Salamander	G2	S2	LE	FE
Ambystoma tigrinum	Tiger Salamander	G5	S3	N	N
Hyla andersonii	Pine Barrens Treefrog	G4	S3	N	SSC
Rana capito	Gopher Frog	G3	S3	N	SSC
Rana okaloosae	Florida Bog Frog	G2	S2	N	SSC
REPTILES					
Agkistrodon contortrix	Copperhead	G5	S2	N	N
Apalone spinifera aspera	Gulf Coast Spiny Softshell	G5T5	S3	N	N
Crotalus adamanteus	Eastern Diamondback Rattlesnake	G4	S3	N	N
Drymarchon couperi	Eastern Indigo Snake	G3	S3	LT	FT
Gopherus polyphemus	Gopher Tortoise	G3	S3	C	ST
Heterodon simus	Southern Hognose Snake	G2	S2	N	N
Macrochelys temminckii	Alligator Snapping Turtle	G3G4	S3	N	SSC
Pituophis melanoleucus mugitus	Florida Pine Snake	G4T3	S3	N	SSC
BIRDS					
Elanoides forficatus	Swallow-tailed Kite	G5	S2	N	N
Haliaeetus leucocephalus	Bald Eagle	G5	53	N	N
Peucaea aestivalis	Bachman's Sparrow	G3	S3	N	N
Picoides borealis	Red-cockaded Woodpecker	G3	S2	LE	FE
Picoides villosus	Hairy Woodpecker	G5	S3	N	N
MAMMALS					
Sciurus niger shermani	Sherman's Fox Squirrel	G5T3	S3	N	SSC
Tamias striatus	Eastern Chipmunk	G5	S2	N	SSC
Ursus americanus floridanus	Florida Black Bear	G5T2	S2	N	ST*
INVERTEBRATES					
Acroneuria evoluta	A Stonefly	G5	S1S2	N	N
Agarodes libalis	Spring-loving Psiloneuran Caddisfly	G3	53	N	N
Agarodes ziczac	Zigzag Blackwater River Caddisfly	G2	S2	N	N
Amblyscirtes aesculapius	Lace-winged Roadside Skipper	G3G4	S3S4	N	N
Amblyscirtes alternata	Dusky Roadside-Skipper	G2G3	S1S2	N	N
Amblyscirtes reversa	Reversed Roadside-Skipper	G3G4	S1	N	N
Aphodius aegrotus	Small Pocket Gopher Aphodius	G3G4	53?	N	N
Apriodius aegiotus	Beetle	6364	331	14	14
Aphodius bakeri	Baker's Pocket Gopher Aphodius Beetle	G2G3	S2	N	N
Aphodius dyspistus	Surprising Packet Gopher Aphodius Beetle	G3G4	53?	N	N
Aphodius gambrinus	Amber Pocket Gopher Aphodius Beetle	G2	S1S2	N	N
Aphodius hubbelli	Hubbell's Pocket Gopher Aphodius Beetle	GNR	S3?	N	N

Note: Summary includes all documented and likely species occurrence records currently in the FNAI database.

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Blackwater River State Forest



Natural Areas

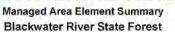
SCIENTIFIC NAME	COMMON NAME	Global rank	State rank	Federal status	State
INVERTEBRATES (cont.)				2	
Aphodius laevigatus	Large Pocket Gopher Aphodius Beetle	G3G4	537	N	N
Aphodius pholetus	Rare Pocket Gopher Aphodius Beetle	G1G2	S1	N	N
Aphodius platypleurus	Broad-Sided Pocket Gopher Aphodius Beetle	G2G3	S2	N	N
Aphodius tanytarsus	Long-Clawed Pocket Gopher Aphodius Beetle	G2G3	S2S3	N	N
Atrytone arogos arogos	Arogos Skipper	G3T1T2	S1	N	N
Baetisca becki	A Mayfly	G2G3	S2	N	N
Baetisca rogersi	A Mayfly	G4	S3	N	N
Callophrys augustinus	Brown Elfin	G5	S1	N	N
Callophrys henrici	Henry's Elfin	G5	5354	N	N
Callophrys hesseli	Hessel's Hairstreak	G3G4	S2	N	N
Callophrys irus	Frosted Elfin	G3	S1	N	N
Celastrina ladon	Spring Azure	G4G5	SU	N	N
Cheumatopsyche petersi	Peters' Cheumatopsyche Caddisfly	G3	S2	N	N
Chimarra florida	Floridian Finger-net Caddisfly	G4	S3S4	N	N
Cordulegaster sayi	Say's Spiketail	G2	S2	N	N
Cupido comyntas	Eastern Tailed Blue	G5	S2	N	N
Dolania americana	American Sand-burrowing Mayfly	G4	S1S2	N	N
Dromogomphus armatus	Southeastern Spinyleg	G4	S3	N	N
Erynnis martialis	Mottled Duskywing	G3	S1	N	N
Euphoria discicollis	Pocket Gopher Flower Beetle	G2	S1S2	N	N
Gomphus geminatus	Twin-striped Clubtail	G3G4	S3	N	N
	Diminutive Clubtail	G1G2	S1S2	N	N
Gomphus westfalli		G5	S1S2		N
Helopicus subvarians	A Stonefly			N	
Hesperia attalus slossonae	Seminole Skipper	G3G4T3	S3	N	N
Hesperia meskei straton	Eastern Meske's Skipper	G3G4T3	S2S3	N	N
Hexagenia bilineata	A Mayfly	G5	S2	N	N
Hydroperla phormidia	A Stonefly	G3	S2		N
Leuctra cottaquilla	A Stonefly	G2	S2	N	N
Nymphalis antiopa	Mourning Cloak	G5	SNA	N	N
Oxyethira elerobi Oxyethira janella	Elerob's Microcaddisfly Little-entrance Oxyethiran Microcaddisfly	G3G4 G5	S2S3 S4S5	N	N
Oxyethira novasota	Novasota Oxyethiran Microcaddisfly	G4G5	S2	N	N
Oxyethira novasola Oxyethira pescadori	Pescador's Bottle-Cased Caddisfly	G3G4	S3	N	N
Perlinella zwicki	A Stonefly	G3G4 G4	S1S2	N	N
Phyllophaga ovalis	Oval June Beetle	G1G2	S1S2	N	N
Progomphus bellei	Belle's Sanddragon	G3	S132	N	N
Ptomaphagus geomysi	Elongate Pocket Gopher	G2G3	S2	N	N
r tomaphagus geomysi	Ptomaphagus Beetle	0203	32	IN	14
Ptomaphagus schwarzi	Schwarz' Pocket Gopher Ptomaphagus Beetle	G3	S3	N	N
Satyrium kingi	King's Hairstreak	G3G4	S2	N	N
Satyrium Kiriyi		G3G4	S1	N	N
Selonodon santarosae	Santa Rosa Cebrionid Beetle				

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NULUTULFITEUS					
SCIENTIFIC NAME	COMMON NAME	Global rank	State rank	Federal status	State status
INVERTEBRATES (cont.)					
Stylurus townesi	Bronze Clubtail	G3	S1	N	N
Tallaperla comelia	Southeastern Roachfly	G4	S1	N	N
PLANTS AND LICHENS					
Agalinis georgiana	Pine Barren False-foxglove	G1	S1	N	N
Baptisia calycosa var. villosa	Hairy Wild Indigo	G3T3	S3	N	LT
Calycanthus floridus	Sweet-shrub	G5	S2	N	LE
Coelorachis tuberculosa	Piedmont Jointgrass	G3	S3	N	LT
Drosera intermedia	Spoon-leaved Sundew	G5	S3	N	LT
Epigaea repens	Trailing Arbutus	G5	S2	N	LE
Lachnocaulon digynum	Bog Button	G3	S3	N	LT
Lilium iridollae	Panhandle Lily	G2	S2	N	LE
Macranthera flammea	Hummingbird Flower	G3	S2	N	LE
Pinguicula primuliflora	Primrose-flowered Butterwort	G3G4	S3	N	LE
Platanthera clavellata	Little Club-spur Orchid	G5	S1	N	LE
Platanthera integra	Yellow Fringeless Orchid	G3G4	S3	N	LE
Pteroglossaspis ecristata	Giant Orchid	G2G3	S2	N	LT
Rhexia parviflora	Small-flowered Meadowbeauty	G2	S2	N	LE
Rhododendron austrinum	Florida Flame Azalea	G3	S3	N	LE
Rhynchospora crinipes	Hairy-peduncled Beaksedge	G2	S2	N	LE
Sarracenia leucophylla	White-top Pitcherplant	G3	S3	N	LE
Sarracenia rubra	Sweet Pitcherplant	G4	S3	N	LT
Xyris scabrifolia	Harper's Yellow-eyed Grass	G3	S3	N	LT

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SCIENTIFIC NAME

COMMON NAME

Global

State Federal

State

Using a ranking system developed by NatureServe and the Natural Heritage Program Network, the Florida Natural Areas Inventory assigns two ranks for each element. The global rank is based on an element's worldwide status; the state rank is based on the status of the element in Florida. Element ranks are based on many factors, the most important ones being estimated number of Element Occurrences (EOs), estimated abundance (number of individuals for species; area for natural communities), geographic range, estimated number of adequately protected EOs, relative threat of destruction, and ecological fragility.

FNAI GLOBAL ELEMENT RANK

- G1 = Critically imperiled globally because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.
- G2 = Imperiled globally because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.
- G3 = Either very rare and local throughout its range (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction from other factors.
- G4 = Apparently secure globally (may be rare in parts of range).
- G5 = Demonstrably secure globally.
- GH = Of historical occurrence throughout its range, may be rediscovered (e.g., ivory-billed woodpecker).
- GX = Believed to be extinct throughout range.
- GXC = Extirpated from the wild but still known from captivity or cultivation.
- G#? = Tentative rank (e.g., G2?).
- G#G# = Range of rank; insufficient data to assign specific global rank (e.g., G2G3).
- G#T# = Rank of a taxonomic subgroup such as a subspecies or variety; the G portion of the rank refers to the entire species and the T portion refers to the specific subgroup; numbers have same definition as above (e.g., G3T1).
- G#Q = Rank of questionable species ranked as species but questionable whether it is species or subspecies; numbers have same definition as above (e.g., G2Q).
- G#T#Q = Same as above, but validity as subspecies or variety is questioned.
- GU = Unrankable; due to a lack of information no rank or range can be assigned (e.g., GUT2).
- GNA = Ranking is not applicable because the element is not a suitable target for conservation (e.g. a hybrid species).
- GNR = Element not yet ranked (temporary).
- GNRTNR = Neither the element nor the taxonomic subgroup has yet been ranked.

FNAI STATE ELEMENT RANK

- S1 = Critically imperiled in Florida because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.
- S2 = Imperiled in Florida because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.
- S3 = Either very rare and local in Florida (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction from other factors.
- S4 = Apparently secure in Florida (may be rare in parts of range).
- S5 = Demonstrably secure in Florida.
- SH = Of historical occurrence in Florida, possibly extirpated, but may be rediscovered (e.g., ivory-billed woodpecker).
- SX = Believed to be extirpated throughout Florida.
- SU = Unrankable; due to a lack of information no rank or range can be assigned.
- SNA = State ranking is not applicable because the element is not a suitable target for conservation (e.g. a hybrid species).
- SNR = Element not yet ranked (temporary).

FEDERAL LEGAL STATUS

Note: Summary includes all documented and likely species occurrence records currently in the FNAI database.

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Legal status information provided by FNAI for information only. For official definitions and lists of protected species, consult the relevant federal agency.

Definitions derived from U.S. Endangered Species Act of 1973, Sec. 3. Note that the federal status given by FNAI refers only to Florida populations and that federal status may differ elsewhere.

- C = Candidate species for which federal listing agencies have sufficient information on biological vulnerability and threats to support proposing to list the species as Endangered or Threatened.
- LE = Endangered species in danger of extinction throughout all or a significant portion of its range
- LE, LT = Species currently listed endangered in a portion of its range but only listed as threatened in other areas.
- LE, PDL = Species currently listed endangered but has been proposed for delisting.
- LE, PT = Species currently listed endangered but has been proposed for listing as threatened.
- LE, XN = Species currently listed endangered but tracked population is a non-essential experimental population.
- LT = Threatened: species likely to become Endangered within the foreseeable future throughout all or a significant portion of its range. SAT = Treated as threatened due to similarity of appearance to a species which is federally listed such that enforcement personnel have difficulty in attempting to differentiate between the listed and unlisted species.
- SC = Not currently listed, but considered a "species of concern" to USFWS.

STATE LEGAL STATUS

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Animals: Definitions derived from "Florida's Endangered Species and Species of Special Concern, Official Lists" published by Florida Fish and Wildlife Conservation Commission, 1 August 1997, and subsequent updates.

- FE = Listed as Endangered Species at the Federal level by the U. S. Fish and Wildlife Service
- FT = Listed as Threatened Species at the Federal level by the U.S. Fish and Wildlife Service
- F(XN) = Federal listed as an experimental population in Florida
- FT(S/A) = Federal Threatened due to similarity of appearance
- ST = State population listed as Threatened by the FFWCC. Defined as a species, subspecies, or isolated population which is acutely vulnerable to environmental alteration, declining in number at a rapid rate, or whose range or habital is decreasing in area at a rapid rate and as a consequence is destined or very likely to become an endangered species within the foreseeable future. (ST* for Ursus americanus floridanus (Florida black bear) indicates that this status does not apply in Baker and Columbia counties and in the Apalachicola National Forest. ST* for Neovison vison pop.1 (Southern mink, South Florida population) indicates that this status applies to the Everglades population only.)
- SSC = Listed as Species of Special Concern by the FFWCC. Defined as a population which warrants special protection, recognition, or consideration because it has an inherent significant vulnerability to habitat modification, environmental alteration, human disturbance, or substantial human exploitation which, in the foreseeable future, may result in its becoming a threatened species. (SSC* indicates that a species has SSC status only in selected portions of its range in Florida. SSC* for Pandion haliaetus (Osprey) indicates that this status applies in Monroe county only.)
- N = Not currently listed, nor currently being considered for listing.

Plants: Definitions derived from Sections 581.011 and 581.185(2), Florida Statutes, and the Preservation of Native Flora of Florida Act, 58-40.001. FNAI does not track all state-regulated plant species; for a complete list of state-regulated plant species, call Florida Division of Plant Industry, 352-372-3505 or see: http://www.doacs.state.fl.us/pi/.

LE = Endangered: species of plants native to Florida that are in imminent danger of extinction within the state, the survival of which is unlikely if the causes of a decline in the number of plants continue; includes all species determined to be endangered or threatened pursuant

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to the U.S. Endangered Species Act.

LT = Threatened: species native to the state that are in rapid decline in the number of plants within the state, but which have not so decreased in number as to cause them to be Endangered.

N = Not currently listed, nor currently being considered for listing.

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Natural Areas				185		
SCIENTIFIC NAME	COMMON NAME	Global rank	State rank	Federal status	State	
	Comment thema	1,4,1,4,1	74.74	Ottatao	Cutuc	
AMPHIBIANS	American Advances			No.		
Ambystoma cingulatum	Frosted Flatwoods Salamander	G2	S2	LT	FT	
REPTILES						
Alligator mississippiensis	American Alligator	G5	S4	SAT	FT(S/	
Drymarchon couperi	Eastern Indigo Snake	G3	S3	LT	FT	
Gopherus polyphemus	Gopher Tortoise	G3	S3	C	ST	
Lampropeltis getula	Common Kingsnake	G5	S2S3	N	N	
Pseudemys concinna suwanniensis	Suwannee Cooter	G5T3	S3	N	SSC	
BIRDS						
Egretta caerulea	Little Blue Heron	G5	S4	N	SSC	
Egretta thula	Snowy Egret	G5	S3	N	SSC	
Elanoides forficatus	Swallow-tailed Kite	G5	S2	N	N	
Haliaeetus leucocephalus	Bald Eagle	G5	S3	N	N	
Pandion haliaetus	Osprey	G5	S3S4	N	SSC*	
Peucaea aestivalis	Bachman's Sparrow	G3	S3	N	N	
Picoides borealis	Red-cockaded Woodpecker	G3	S2	LE	FE	
MAMMALS						
Sciurus niger niger	Southeastern Fox Squirrel	G5T5	S3	N	N	
Ursus americanus floridanus	Florida Black Bear	G5T2	S2	N	ST*	
PLANTS AND LICHENS						
Andropogon arctatus	Pine-woods Bluestem	G3	S3	N	LT	
Asclepias viridula	Southern Milkweed	G2	S2	N	LT	
Drosera intermedia	Spoon-leaved Sundew	G5	S3	N	LT	
Gentiana pennelliana	Wiregrass Gentian	G3	S3	N.	LE	
Hymenocallis henryae	Panhandle Spiderlily	G2	S2	N	LE	
Ilex amelanchier	Serviceberry Holly	G4	S2	N	LT	
Justicia crassifolia	Thick-leaved Water-willow	G3	S3	N	LE	
Liatris provincialis	Godfrey's Blazing Star	G2	S2	N	LE	
Linum westii	West's Flax	G2	S2	N	LE	
Lupinus westianus	Gulf Coast Lupine	G3	S3	N	LT	
Lythrum curtissii	Curtiss' Loosestrife	G1	S1	N	LE	
Macbridea alba	White Birds-in-a-nest	G2	S2	LT	LE	
Myriophyllum laxum	Piedmont Water Milfoil	G3	S3	N.	N	
Nolina atopocarpa	Florida Beargrass	G3	S3	N	LT	
Nyssa ursina	Bog Tupelo	G2	S2	N	N	
Phoebanthus tenuifolius	Narrow-leaved Phoebanthus	G3	S3	N	LT	
Physostegia godfreyi	Apalachicola Dragon-head	G3	S3	N	LT	
Pinguicula ionantha	Godfrey's Butterwort	G2	S2	LT.	LE	
Platanthera integra	Yellow Fringeless Orchid	G3G4	S3	N	LE	
Polygonella macrophylla	Large-leaved Jointweed	G3	S3	N	LT	
Rhexia parviflora	Small-flowered Meadowbeauty	G2	S2	N	LE	
Ruellia noctiflora	Nightflowering Wild Petunia	G2	S2	N	LE	
Sarracenia leucophylla	White-top Pitcherplant	G3	S3	N	LE	
Scutellaria floridana	Florida Skullcap	G2	S2	LT	LE	

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SCIENTIFIC NAME

COMMON NAME

Global

State Federal

State status

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- G3 = Either very rare and local throughout its range (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction from other factors.
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- G5 = Demonstrably secure globally.
- GH = Of historical occurrence throughout its range, may be rediscovered (e.g., ivory-billed woodpecker).
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- GXC = Extirpated from the wild but still known from captivity or cultivation.
- G#? = Tentative rank (e.g., G2?).
- G#G# = Range of rank; insufficient data to assign specific global rank (e.g., G2G3).
- G#T# = Rank of a taxonomic subgroup such as a subspecies or variety; the G portion of the rank refers to the entire species and the T portion refers to the specific subgroup; numbers have same definition as above (e.g., G3T1).
- G#Q = Rank of questionable species ranked as species but questionable whether it is species or subspecies; numbers have same definition as above (e.g., G2Q).
- G#T#Q = Same as above, but validity as subspecies or variety is questioned.
- GU = Unrankable; due to a lack of information no rank or range can be assigned (e.g., GUT2).
- GNA = Ranking is not applicable because the element is not a suitable target for conservation (e.g. a hybrid species).
- GNR = Element not yet ranked (temporary).
- GNRTNR = Neither the element nor the taxonomic subgroup has yet been ranked.

FNAI STATE ELEMENT RANK

- S1 = Critically imperiled in Florida because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.
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- S3 = Either very rare and local in Florida (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction from other factors.
- S4 = Apparently secure in Florida (may be rare in parts of range).
- S5 = Demonstrably secure in Florida.
- SH = Of historical occurrence in Florida, possibly extirpated, but may be rediscovered (e.g., ivory-billed woodpecker).
- SX = Believed to be extirpated throughout Florida.
- SU = Unrankable; due to a lack of information no rank or range can be assigned.
- SNA = State ranking is not applicable because the element is not a suitable target for conservation (e.g. a hybrid species).
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FEDERAL LEGAL STATUS

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LE, LT = Species currently listed endangered in a portion of its range but only listed as threatened in other areas.

LE, PDL = Species currently listed endangered but has been proposed for delisting.

LE, PT = Species currently listed endangered but has been proposed for listing as threatened.

LE, XN = Species currently listed endangered but tracked population is a non-essential experimental population.

LT = Threatened: species likely to become Endangered within the foreseeable future throughout all or a significant portion of its range. SAT = Treated as threatened due to similarity of appearance to a species which is federally listed such that enforcement personnel have difficulty in attempting to differentiate between the listed and unlisted species.

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Animals: Definitions derived from "Florida's Endangered Species and Species of Special Concern, Official Lists" published by Florida Fish and Wildlife Conservation Commission, 1 August 1997, and subsequent updates.

FE = Listed as Endangered Species at the Federal level by the U. S. Fish and Wildlife Service

FT = Listed as Threatened Species at the Federal level by the U.S. Fish and Wildlife Service

F(XN) = Federal listed as an experimental population in Florida

FT(S/A) = Federal Threatened due to similarity of appearance

ST = State population listed as Threatened by the FFWCC. Defined as a species, subspecies, or isolated population which is acutely vulnerable to environmental alteration, declining in number at a rapid rate, or whose range or habital is decreasing in area at a rapid rate and as a consequence is destined or very likely to become an endangered species within the foreseeable future. (ST* for Ursus americanus floridanus (Florida black bear) indicates that this status does not apply in Baker and Columbia counties and in the Apalachicola National Forest. ST* for Neovison vison pop.1 (Southern mink, South Florida population) indicates that this status applies to the Everglades population only.)

SSC = Listed as Species of Special Concern by the FFWCC. Defined as a population which warrants special protection, recognition, or consideration because it has an inherent significant vulnerability to habitat modification, environmental alteration, human disturbance, or substantial human exploitation which, in the foreseeable future, may result in its becoming a threatened species. (SSC* indicates that a species has SSC status only in selected portions of its range in Florida. SSC* for Pandion haliaetus (Osprey) indicates that this status applies in Monroe county only.)

N = Not currently listed, nor currently being considered for listing.

Plants: Definitions derived from Sections 581.011 and 581.185(2), Florida Statutes, and the Preservation of Native Flora of Florida Act, 58-40.001. FNAI does not track all state-regulated plant species; for a complete list of state-regulated plant species, call Florida Division of Plant Industry, 352-372-3505 or see: http://www.doacs.state.fl.us/pi/.

LE = Endangered: species of plants native to Florida that are in imminent danger of extinction within the state, the survival of which is unlikely if the causes of a decline in the number of plants continue; includes all species determined to be endangered or threatened pursuant

08/28/2013

Page 3 of 4





to the U.S. Endangered Species Act.

LT = Threatened: species native to the state that are in rapid decline in the number of plants within the state, but which have not so decreased in number as to cause them to be Endangered.

N = Not currently listed, nor currently being considered for listing.

08/28/2013 Page 4 of 4

Scoping Written Comment Form

ENVIRONMENTAL IMPACT STATEMENT

U.S. AIR FORCE PROPOSAL FOR THE GULF REGIONAL AIRSPACE STRATEGIC INITIATIVE (GRASI) LANDSCAPE INITIATIVE (GLI)

Please submit scoping comments to the address below or via the GRASI Landscape Initiative EIS website (grasieis.leidoseemg.com) by September 12, 2013.

Please print legibly

Dear Sirs:

This is one of the worst ideas ever. While literally tens of thousands of acres at Tyndall Air Force Base remain unutilized, you think it necessary to expand elsewhere. Your problem is one of land and use classification. There is no need to infringe upon State Forest at all. Any additional use of this resource in any form is deleterious to the environment , and the intended

Mention should also be made to the abject cynicism or your motives- to take from the many for the dubious benefit of the few. You should also be ashamed of the violence your duplicitious bureaucratic jargon does to the English language.

Name:	W	GRAHAM	X
Organiz	ation	CAP PICTORY	4-100

Address:

City/State/Zip:

- Yes, includ and address on the mailing list so I can receive information on the GRASI Landscape Initiative EIS.
- No, do not include my name and address on the mailing list.

Please mail this form to:

Mr. Mike Spaits, Eglin AFB Public Affairs Office, 96 TW/PA 101 West D Avenue, Room 238, Eglin AFB, FL 32542-5499

or scan and email to: spaitsm@eglin.af.mil

----Original Message--

From: BrendaLee [mailto:

Sent: Friday, September 06, 2013 10:55 AM To: Spaits, Mike GS12 USAF AFMC 96 TW/PA

Subject: GRASI

I am writing to express my concerns and opposition to the use of Tate's Hell State Forest for military training exercises by Eglin Air Force Base as proposed under the Gulf Regional Airspace Strategic Initiative (GRASI) Landscape Initiative (GLI). The original purpose for converting the Tate's Hell tract from county property to state-owned forest was CONSERVATION: (1) for hydrological protection and restoration of Apalachicola Bay, (2) to conserve many rare and endangered habitats and species of flora and fauna found within the fragile Tate's Hell State Forest environment, and (3) to preserve traditional and recreational uses of the land by the citizens whose tax monies were used for establishing this State Forest. The creation of Tate's Hell State Forest through the use of public funds was supported by Franklin County government and residents to protect and conserve the land for public and environmental benefits, and NOT for any usurping of those benefits by the military. There are serious consequences associated with the GRASI proposal and the following concerns must be considered. All plants, wetlands, water, insects, birds and wildlife will be severely impacted by the fuel exhaust of the low-flying (tree level) helicopters. That water flows into the already dying Apalachicola Bay. The noise alone from these planes, helicopters and training exercises will devastate all birds and wildlife, as well as create untold problems for citizens living anywhere near that vicinity. The life cycles of nocturnally foraging animals will be disrupted by holding military training exercises primarily at night. The airspace used by private pilots to land at our local airports will be compromised by giving priority for the use of that same airspace to military aircraft. Any military radar emitters installed within Franklin County have the potential to disrupt civilian and private pilot communication devices and may even have health consequences for citizens who live nearby. Many of the residents of Franklin County depend on the bounty Tate's Hell State Forest provides through hunting and fishing to feed their families in this economically disadvantaged community. The unique ecology found within Tate's Hell State Forest such as the Dwarf Cypress Swamp and over 90 species of rare and endangered wildlife (such as the Red-Cockaded Woodpecker) are at risk of being damaged or destroyed by military training exercises and/or accidents that may occur during such military usage. Tate's Hell State Forest has one of the largest Black Bear populations in Florida, as well as a very large population of nesting American Bald Eagles. Tate's Hell is also part of the Great Florida Birding Trail and is visited by birdwatchers, photographers, nature lovers, hunters, fishermen, local residents and tourists from far away. Lastly, during the Scoping Meetings, the public was not even allowed to ask questions; any questions asked were ignored. For all of these reasons, I am resolutely opposed to the use of Tate's Hell State Forest for military training exercises. Sincerely,

"BrendaLee" I am no longer "young" enough to know everything!"

"The Constitution is not an instrument for the government to restrain the people, it is an instrument for the people to restrain the government - lest it come to dominate our lives and interests". - Patrick Henry

$ \heartsuit$ Please consider the environment before printing this mail note. $ \heartsuit$

Scoping Written Comment Form

ENVIRONMENTAL IMPACT STATEMENT

U.S. AIR FORCE PROPOSAL FOR THE GULF REGIONAL AIRSPACE STRATEGIC INITIATIVE (GRASI) LANDSCAPE INITIATIVE (GLI)

Please submit scoping comments to the address below or via the GRASI Landscape Initiative EIS website (grasieis.leidoseemg.com) by September 12, 2013.

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Mr. Mik	e Spaits, Eglin AFB Public Affairs O	ffice, 96 TW/PA
101 We	st D Avenue, Room 238, Eglin AFB,	FL 32542-5499
	or scan and email to:	
	spaitsm@eglin.af.mil	

www.cityofapalachicola.com

September 4, 2013

Mayor

Van W. Johnson, Sr.

Commissioners Brenda Ash John M. Bartley, Sr. Frank Cook James L. Elliott Mr. Mike Spaits
Eglin AFB Public Affairs Office

96 TW/PA, 101 West D Avenue, Room 238

Eglin AFB, FL 32452-5499

City Administrator Betty Taylor-Webb

RE: Eglin GRASI EIS Scoping Period: Request for an Extension of the Public Comment Period (for a total of 90 days)

VIA EMAIL

mike.spaits@eglin.af.mil

City Clerk Lee H. Mathes, MMC

Dear Mr. Spaits:

City Attorney
J. Patrick Floyd

I was recently made aware of the public comment period for the GRASI EIS Scoping. While it is certain that the U. S. Air Force would prefer to move forward on this issue as quickly as possible, I respectfully request an extension of the public comment period so that the perspectives from the stakeholders in our community can have a reasonable amount of time to offer comment and provide you with our concerns.

I am requesting this for the following reasons:

- The public meeting was not widely advertised. Although federal regulations
 were followed (e.g., federal register notice on August 12th), public advertising on
 a local radio station and a weekly newspaper seems inadequate given the
 nature of your proposal.
- The public comment period includes a holiday week/weekend where many are preoccupied with family matters.
- The web page http://grasieis.leidoseemg.com was inaccessible for much of the Labor Day weekend (Saturday through mid-day Monday).
- Federal public comment periods vary, but they are usually for 30, 60, or 90 days.
 Given the complexity and possible implications of Air Force activities, 30 days seems unreasonably short.
- Other federal agencies allow much longer than 30-day public comment periods for highly technical and complex matters.
- The GRASI EIS impact on a national treasure is a highly complex matter and the details of proposed U. S. Air Force activities are very vague.
- Stakeholders include the local seafood industry, area tourism, the economy, local residents, the health of Tate's hell and the Apalachicola Bay. Our stakeholders are all intertwined. The local and national community should have

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Page 2 - Mike Spaits

more time to consider the implications of the "U.S. Air Force proposal to conduct training activities on state forests and to establish emitter sites in northwest Florida under the Gulf Regional Airspace Strategic Initiative (GRASI) Landscape Initiative."

• I question whether the U. S. Air Force can set a deadline for public comments on such a vague proposal – about 1 ½ columns in the Federal Register.

I urge the U. S. Air Force to be aligned with the Obama Administration's directive to "work together to ensure the public trust and establish a system of transparency, public participation, and collaboration."

Respectfully submitted,

Van W. Joh

Mavo

Cc:

Governor Rick Scott Rep. Steve Southerland II Senator Bill Nelson Senator Marco Rubio FL Senator Bill Montford FL Rep Hasley Beshears

From To: Subject: Comments on GRASI Landscape Initiative EIS Sunday, September 15, 2013 7:16:14 AM Date: I have worked for several decades on the conservation of rare species of plants and animals in Florida and the Florida Panhandle region. The Blackwater River State Forest and Tate's Hell Swamp conservation areas are some of the largest and last remaining intact natural ecosystems of the Panhandle. These lands were not purchased with tax payers money as military training sites. There is plenty of private paper company land available in the Florida Panhandle for the US Air Force to purchase or lease for training purposes. Do not use our state lands for military training. Rare species will be impacted and the unique natural ecosystems of Blackwater River SF and Tate's Hell Swamp will be degraded by the roads, trails, people, and training activities. Marc C. Minno, Ph. D.

Scoping Written Comment For	rm
ENVIRONMENTAL IMPACT STATEM	
U.S. AIR FORCE PROPOSAL FOR THE GULF REGIONAL	
INITIATIVE (GRASI) LANDSCAPE INITIAT	
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Organization: Address: City/State/Zip: Yes, include my name and address on the mailinformation on the GRASI Landscape Initiative EIS. No, do not include my name and address on the mailinformation.	ng list.

September 12, 2013

RE: GRASI Scoping Written Comment

To Whom It May Concern:

I want to be sure our military remains the best in the world. At the same time, I also want to preserve our parks with their flora and fauna for our own domestic transquility.

As Floridians continue the path of bulldoze, burn and build we continue to lose natural places. Being a resident of Santa Rosa County, Blackwater State Forest is one of those places I have retreated for both recreation (to have fun in nature) and for restoration (to seek solace during times of worry). There are so few natural places left for private citizens to access anymore.

As a native Floridian, I remember walking through the woods many, many times as a child near our home in Escambia County. As an adult, this is no longer possible. The only access to natural places is that which is being conserved in public parks.

I am concernerd that opening the forest to miliatary exercises - though done in a conscientious manner- is still taking another bite out of the very limited remaining naural places left in this state.

I would like to request the commission to strongly consider possible other alternatives.

Thank you for hearing my concerns and taking them in to account.

Tina Murphy

Native Floridian and Resident of Santa Rosa County.

----Original Message----

From: Judy Myers [mailto:

Sent: Tuesday, September 10, 2013 12:48 PM To: Spaits, Mike GS12 USAF AFMC 96 TW/PA

Subject: GRASI

Dear Mr. Spaits;

I am writing to voice my opposition to the GRASI proposal. The Tate's Hell State Forest was meant to be an area for conservation. Having lived near Air Force Bases, I can tell you that I moved away, because I couldn't stand the noise. What do you think will happen to the wildlife that lives there?

Also, my father and step-mother live within a few miles of the Tate's Hell State Forest, and I am concerned about ill affects to their health from the Radar. My father worked very hard, and retired to Carrabelle. My step-mother works at a local business. They love it there. My dad is an artist and photographer, and actually spends a great deal of time in Tate's Hell

The last time we visited my father, my children and I drove through part of Tate's Hell. We saw butterflies, birds, ducks, a bobcat, and deer. We also saw the primitive camp sites, and my children, ages 12 & 7, were very excited! They want to go back there this winter, on break, and camp! As a parent, I think it is very important for children to have some "wilderness" left to play and learn in! In the age of video screens and social media, I think we could do with a little more of it in their lives, not less.

Lastly, you are probably thinking, "She doesn't understand that we need this area to train.". I do understand. My husband is a Disabled Army Veteran. His father, and both grandfathers are all Veterans. My step-sister is a Marine. I get it. Training and preparedness is important.

I also feel that saving what little wilderness is left in our great nation is equally important.

Thank you so much for your time, and I hope you give this a great deal of thought before you make a decision that I believe we will regret.

Sincerely,

Judy Myers

Scoping Written Comment Form

ENVIRONMENTAL IMPACT STATEMENT

U.S. AIR FORCE PROPOSAL FOR THE GULF REGIONAL AIRSPACE STRATEGIC INITIATIVE (GRASI) LANDSCAPE INITIATIVE (GLI)

Please submit scoping comments to the address below or via the GRASI Landscape Initiative EIS website (grasieis.leidoseemg.com) by September 12, 2013.

	n: Biaci	kwater River State	Forest	Date: 10 September 2013
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---- Original Message---

From: Gathana Parmenas [mailto]

Sent: Thursday, September 12, 2013 8:43 PM To: Spaits, Mike GS12 USAF AFMC 96 TW/PA Subject: GRASI – Tate's Hell State Forest

Sent: Thursday, September 12, 2013 3:11 PM Subject: GRASI - Tate's Hell State Forest

The members of the Panhandle Citizens' Coalition have authorized me to write on behalf of the organization to express our opposition to the use of Tate's Hell State Forest for military training by the Air Force as proposed under the Gulf Regional Airspace Strategic Initiative (GRASI) Landscape Initiative (GLI).

First, the impetus for creating this state forest was for conservation and restoration of wildlife habitat, and to restore the hydrologic system supporting Apalachicola Bay and the Gulf of Mexico. The area has benefited from public funds devoted to conserving the rare and endangered species which depend on this fragile environment, but continued care and continued restoration efforts are needed. Even with past efforts, Apalachicola Bay, the oyster industry, and the entire estuary are currently in a perilous condition.

Second, the citizens of the Florida Panhandle supported the use of public monies in this conservation effort with the understanding that the traditional recreational uses of the forest would continue and be enhanced by the effort. Property owners of Franklin County are well aware that these lands are no longer in the county property tax base and understand the cost to them. Franklin County is an economically disadvantaged area, and the citizens view unimpeded use of the public lands as the biggest (for some, the only) benefit to that trade-off.

Third, the economic future of the Panhandle is tied to the health and natural conditions of Tate's Hell State Forest. Residents rely on the forest for fishing and hunting, often to feed their families. Tourists are attracted to its bird life, including the red-cockaded woodpecker, black bear, and over 90 other rare and endangered species. Economic development studies all point to the forest's resources as the key to growth in tourism. Even if military activities were limited to non-hunting season, tourism would be negatively impacted.

The proposed activities will cause disruption of the dark skies and quiet essential to the natural life cycles of all life in the forest --- from insect to bald eagle and bear. Civilians living nearby, or camping within the forest, will likewise be impacted. Military radar installations, whether mobile or fixed, may disrupt civilian and private pilot communication and have unknown health consequences for all species. There is a real possibility of training accidents, which Franklin County experienced when an Air Force jet went down off St. George Island.

Panhandle Citizens Coalition wishes to express its concern over the short time frame for public comment, and the history of leaving the public out of the initial six years of planning which apparently went into this proposal. The scoping meetings were a great disappointment, providing no question and answer session.

The members of the Panhandle Citizens Coalition are unanimous in their opposition to the use of Tate's Hell State Forest for further Air Force training exercises. We urge you to find an alternative location, or alternative method of training, and allow this region to continue as a nature preserve.

John Hedrick, President Gathana Parmenas, Vice-President

-----Original Message-From: jean public [mailto: Sent: Sunday, August 18, 2013 4:18 PM To: Spaits, Mike GS12 USAF AFMC 96 TW/PA; SCOOP; info; Robin Perkins-Baiettini; info Subject: Fwd: stop bombing america PUBLIC PUBLIC COMMENT ON FEDERAL REGISTER I OPPOSE USING BLACKWATER FOREST AND TALES HILL FOREST FOR FURTHER MILITARY DESTRUCTION. THE AIR FORCE HAS POLLUTED ENOUGH, USE THE MILITARY SITES THAT YOU HAVE ALREADY DESTROYED AND STOP GOING TO NEW SITES TO DESTROY. THIS IDEA OF NEW SITES TO DESTROY IS ENVIRONMENTALLY ATROCIOUS AND ABOMINABLE. TAXPAYERS OPPOSE THIS DESTRUCTION OF AMERICA BY OUR OWNMILITARY. THIS COMMENT IS FOR THE PUBLIC RECORD. PLEASE ACKNOWLEDGE RECEIPT. JEAN PUBLIC > [Federal Register Volume 78, Number 155 (Monday, August 12, 2013)] [Notices] [Page 48862] From the Federal Register Online via the Government Printing Office [www.gpo.gov] [FR Doc No: 2013-19468] DEPARTMENT OF DEFENSE Department of Air Force Intent To Prepare an Environmental Impact Statement for the Gulf Regional Airspace Strategic Initiative (GRASI) Landscape Initiative AGENCY: Department of the Air Force, DOD. ACTION: Notice of Intent. SUMMARY: The Air Force is issuing this notice to advise the public of its intent to prepare an Environmental Impact Statement (EIS). The Gulf Regional Airspace Strategic Initiative (GRASI) Landscape Initiative (GLI) is a U.S Air Force-led partnership with the State of Florida and other state and federal agencies to expand the capacity of the region to safely host military test and training operations. Under the GLI EIS, the Air Force's Proposed Action is to utilize

Blackwater River State Forest (BRSF) and Tate's Hell State Forest (THSF) for establishing helicopter landing and drop zones, airstrips, and a number of different land and air training activities which currently occur within the interstitial (areas between designated test/ training sites) areas of the Eglin Air Force Base (AFB) Range. The Air Force is also proposing to establish up to 12 radar, telemetry, and training emitter sites throughout northwest Florida. The emitter sites would support development of an integrated air defense system, which would provide unique, viable, and robust air training.

Scoping: In order to effectively define the full range of issues to be evaluated in the EIS, the Air Force will determine the scope (i.e. what will be covered and in what detail) by soliciting comments from interested state and federal agencies and interested members of the public through the Federal Register and various media in the local communities near the Proposed Action. The Air Force will also hold a series of scoping meetings to further solicit input regarding the scope of the proposed action and any reasonable alternatives.

DATES: Scoping meetings will be held in the local communities near the state forests. The scheduled dates, times, locations and addresses for the scoping meetings will be published in local media a minimum of 15 days prior to the scoping meetings. The Air Force intends to hold scoping meetings in the following communities on the following dates:

August 27, 2013: Milton Community Center, Gracie Room, 5629 Byrom St., Milton, Florida August 28, 2013: Blountstown Civic Center, 17773 Ne Pear St., Blountstown, Florida August 29, 2013: Apalachicola Community Center, 1 Bay Ave, Apalachicola, Florida

Scoping comments can be submitted to the mailing address below or via the GRASI GLI EIS Web site (grasieis.leidoseemg.com) by the date indicated. Comments will be accepted at any time during the environmental impact analysis process. However, to ensure the Air Force has sufficient time to consider public input in the preparation of the Draft EIS, comments should be submitted to the Web site or the address listed below by September 9, 2013.

FOR FURTHER INFORMATION CONTACT: Mr. Mike Spaits, Eglin AFB Public Affairs Office, 96 TW/PA, 101 West D Avenue, Suite 110, Eglin AFB, FL 32542-5499,

September 9,

2013.

Henry Williams Jr,

DAF, Acting Air Force Federal Register Liaison Officer.

[FR Doc. 2013-19468 Filed 8-9-13; 8:45 am] BILLING CODE 5001-10-P

----Original Message--

From: Donna (mailto:

Sent: Saturday, September 07, 2013 7:33 AM To: Spaits, Mike GS12 USAF AFMC 96 TW/PA

Subject: Tates Hell

I am writing to express my concerns and opposition to the use of Tate's Hell State Forest for military training exercises by Eglin Air Force Base as proposed under the Gulf Regional Airspace Strategic Initiative (GRASI) Landscape Initiative (GLI). The original purpose for converting the Tate's Hell tract from county property to state-owned forest was CONSERVATION: (1) for hydrological protection and restoration of Apalachicola Bay, (2) to conserve many rare and endangered habitats and species of flora and fauna found within the fragile Tate's Hell State Forest environment, and (3) to preserve traditional and recreational uses of the land by the citizens whose tax monies were used for establishing this State Forest. The creation of Tate's Hell State Forest through the use of public funds was supported by Franklin County government and residents to protect and conserve the land for public and environmental benefits, and NOT for any usurping of those benefits by the military. There are serious consequences associated with the GRASI proposal and the following concerns must be considered. All plants, wetlands, water, insects, birds and wildlife will be severely impacted by the fuel exhaust of the low-flying (tree level) helicopters. That water flows into the already dying Apalachicola Bay. The noise alone from these planes, helicopters and training exercises will devastate all birds and wildlife, as well as create untold problems for citizens living anywhere near that vicinity. The life cycles of nocturnally foraging animals will be disrupted by holding military training exercises primarily at night. The airspace used by private pilots to land at our local airports will be compromised by giving priority for the use of that same airspace to military aircraft. Any military radar emitters installed within Franklin County have the potential to disrupt civilian and private pilot communication devices and may even have health consequences for citizens who live nearby. Many of the residents of Franklin County depend on the bounty Tate's Hell State Forest provides through hunting and fishing to feed their families in this economically disadvantaged community. The unique ecology found within Tate's Hell State Forest such as the Dwarf Cypress Swamp and over 90 species of rare and endangered wildlife (such as the Red-Cockaded Woodpecker) are at risk of being damaged or destroyed by military training exercises and/or accidents that may occur during such military usage. Tate's Hell State Forest has one of the largest Black Bear populations in Florida, as well as a very large population of nesting American Bald Eagles. Tate's Hell is also part of the Great Florida Birding Trail and is visited by birdwatchers, photographers, nature lovers, hunters, fishermen, local residents and tourists from far away. Lastly, during the Scoping Meetings, the public was not even allowed to ask questions; any questions asked were ignored. For all of these reasons, I am resolutely opposed to the use of Tate's Hell State Forest for military training exercises.

Sincerely,
Donna Shannon



FLORIDA DEPARTMENT OF STATE

RICK SCOTT Governor

KEN DETZNER Secretary of State

Mr. Mike Spaits
Eglin AFB Public Affairs Office
96 TW/PA
101 West D Avenue, Room 238
Eglin AFB, Florida 32542-5499

September 10, 2013

RE:

DHR Project File Number: 2013-3922

Department of the Air Force

Preparation of an Environmental Impact Statement (EIS) for the Gulf Regional Airspace Strategic Initiative

(GRASI) Landscape Initiative

Dear Mr. Spaits:

We note that the Department of the Air Force is preparing an Environmental Impact Statement to utilize Blackwater River State Forest and Tate's Hell State Forest for establishing helicopter landing and drop zones, airstrips, and a number of different land and air training activities which currently occur on Eglin Air Force Base. The Air Force is also proposing to establish up to 12 radar, telemetry and training emitter sites throughout northwest Florida.

This office looks forward to receiving the document and coordinating with you regarding cultural resources that may be impacted by this undertaking in accordance with Section 106 of the *National Historic Preservation Act of 1966*, as amended, 36 CFR Part 800: Protection of Historic Properties and the National Environmental Policy Act of 1969, as amended.

If you have any questions concerning our comments, please contact Scott Edwards, Historic Preservationist, by electronic mail <code>scott.edwards@dos.myflorida.com</code>, or at 850.245.6333 or 800.847.7278.

Sincerely

Robert K. Bendus, Director Division of Historical Resources and State Historic Preservation Officer



DIVISION OF HISTORICAL RESOURCES
R. A. Gray Building • 500 South Bronough Street • Tallahassee, Florida 32399-0250
Telephone: 850.245.6300 • Facsimile: 850.245.6436 • www.flheritage.com
Commemorating 500 years of Florida history www.vivaflorida.com



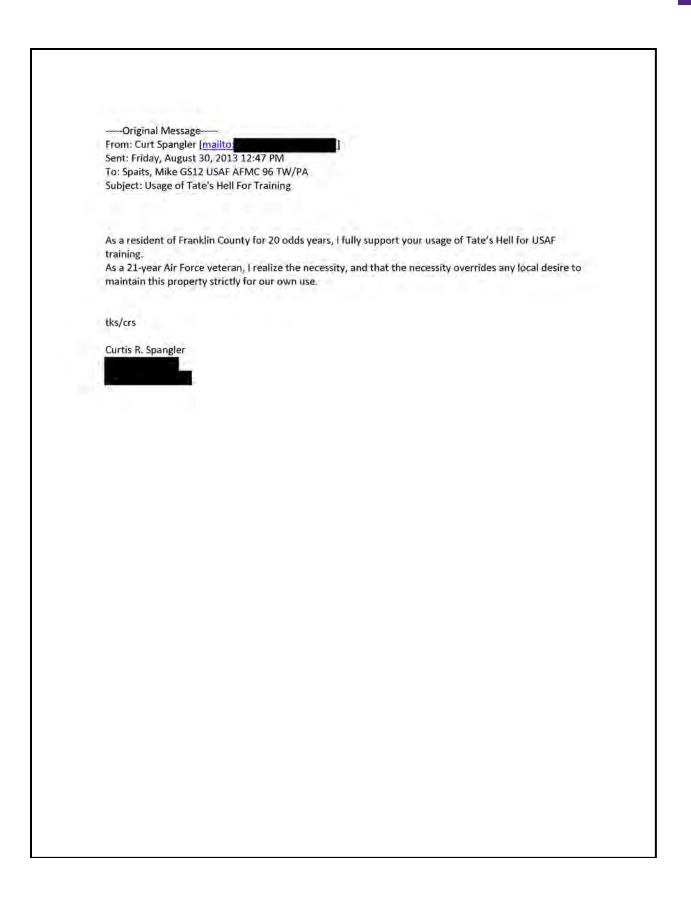
Scoping Written Comment Form

ENVIRONMENTAL IMPACT STATEMENT

U.S. AIR FORCE PROPOSAL FOR THE GULF REGIONAL AIRSPACE STRATEGIC INITIATIVE (GRASI) LANDSCAPE INITIATIVE (GLI)

Please submit scoping comments to the address below or via the GRASI Landscape Initiative EIS website (grasieis.leidoseemg.com) by September 12, 2013.

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	or scan and email to: spaitsm@eglin.af.mil	er e e en
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----Original Message-

From: Melissa Starbuck [mailto.

Sent: Monday, September 02, 2013 12:48 PM To: Spaits, Mike GS12 USAF AFMC 96 TW/PA

Subject: DISCREPANCY on GRASI Public Comment DEADLINE?

Dear Mr. Spaits,

The attached GRASI document created by the Air Force concerning the proposed plans for Tate's Hell State Forest, etc. states that the deadline for Public Comment is September 12, 2013.

However, your website seems to state that the deadline is September 9, 2013. Here's a link to that page:

http://grasieis.leidoseemg.com/announcements.aspx

And here's the paragraph in question from that page of your website: "The scoping period will end on September 9, 2013. The Air Force and the environmental analysts preparing the EIS will review the scoping comments and summaries at the end of the scoping period and incorporate them into the Draft EIS analysis."

Which date is correct?

Also, I'd like you to know that all day yesteday several of us could not even access your website. I have no idea how long it was like that; it is working today. But when you only give us 30 days notice (when you could have given us 60, 90 or 120) for public comment, and we pretty much find out about it with about 2 weeks notice, and part of that 2 weeks is a long holiday weekend.......to have the website be unavailable during that two week period is completely unacceptable and inexcusable.

I'd appreciate a clarification or an explanation on the possible date discrepancy ASAP, since (as you all very carefully planned) time is of the essence here.

Thank you, Melissa Starbuck





Murphy Super Rebel 11960S

October 9, 2013

Mr. Mike Spaits, Eglin AFB Public Affairs Office 96 TW/PA, 101 West D Avenue, Room 238 Eglin AFB, FL 32542-5499

RE: GRASI GLI EIS Comments

Mr. Spaits,

As a user of the air space mentioned in this proposal, I want to voice my very real objection to any use of air space (and public grounds) that would in any way restrict use of such space and grounds to the public. I especially object to the use of the Blackwater public grounds for military purposes. The Blackwater area is public green-space, set aside to preserve it in a natural state. Use by the military for training would be in direct opposition to its intended purpose.

The air space and ground space around the various military installations in this area is already vast and complicated. The air and ground space set aside for Eglin operations alone is extremely large, covering areas in over four counties. This does not even include the vast Gulf areas. Add to this the space for NAS Pensacola and the Whiting areas and you already have vast, almost untold, square miles of already restricted space that could be used. Certainly there is more than adequate land, already restricted, that is available for the training purposes noted.

Further, I find the lack of information circulated and the limited comment solicitation methods on this proposal to be totally biased; seemingly aimed to getting it "below the radar".

I am forwarding my comments to my local, state and federal representatives and will ask for their intervention to limit this encroachment onto and into public land and air space.

Respectfully,

Charles W. Starr

-Original Message-From: Joyce Tarnow [mailto: Sent: Friday, September 13, 2013 6:41 AM To: Spaits, Mike GS12 USAF AFMC 96 TW/PA Subject: Resend from Bounced RESEND-Subject: Failure Notice Date: Thu, 12 Sep 2013 14:07:50 -0000 From: Sorry, we were unable to deliver your message to the following address. Mr. Mike Spaits Eglin Air Force Base September 11, 2013 Dear Mr. Spaits: I am writing to express my concerns and opposition to the use of Tate's Hell State Forest for military training exercises by Eglin Air Force Base as proposed under the Gulf Regional Airspace Strategic Initiative (GRASI) Landscape Initiative (GLI). The original purpose for converting the Tate's Hell tract from county

property to state-owned forest was CONSERVATION:

- (1) for hydrological protection and restoration of Apalachicola Bay,
- (2) to conserve many rare and endangered habitats and species of flora and fauna found within the fragile Tate's Hell State Forest environment, and
- (3) to preserve traditional and recreational uses of the land by the citizens whose tax monies were used for establishing this State Forest.

The creation of Tate's Hell State Forest through the use of public funds was supported by Franklin County government and residents to protect and conserve the land for public and environmental benefits, and NOT for any usurping of those benefits by the military. There are serious consequences associated with the GRASI proposal and the following concerns must be considered. All plants, wetlands, water, insects, birds and wildlife will be severely impacted by the fuel exhaust of the

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Tate's Hell State Forest has one of the largest Black Bear populations in Florida, as well as a very large population of nesting American Bald Eagles. Tate's Hell is also part of the Great Florida Birding Trail and is visited by birdwatchers, photographers, nature lovers, hunters, fishermen, local residents and tourists from far away. Lastly, during the Scoping Meetings, the public was not even allowed to ask questions; any questions asked were ignored.

For all of these reasons, I am resolutely opposed to the use of Tate's Hell State Forest for military training exercises. The Nature Coast is our environmental tourism mecca and our economic underpinning.

Sincerely,



Scoping Written Comment Form ENVIRONMENTAL IMPACT STATEMENT

U.S. AIR FORCE PROPOSAL FOR THE GULF REGIONAL AIRSPACE STRATEGIC INITIATIVE (GRASI) LANDSCAPE INITIATIVE (GLI)

Please submit scoping comments to the address below or via the GRASI Landscape Initiative EIS website (grasieis.leidoseemg.com) by September 12, 2013.

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honored to the extent allowed by law. All submissions from organizations or businesses, and from individuals or officials representing organizations or businesses, will be made available for public inspection in their entirety. Name: Organization: Address: City/State/Zip: Yes, include my name and address on the mailing list so I can receive information on the GRASI Landscape Initiative EIS.
No, do not include my name and address on the mailing list.
Please mail this form to:
Mr. Mike Spaits, Eglin AFB Public Affairs Office, 96 TW/PA 101 West D Avenue, Room 238, Eglin AFB, FL 32542-5499
or scan and email to: spaitsm@eglin.af.mil

----Original Message--

From: Louis Toth [mailto:

Sent: Friday, August 23, 2013 10:29 AM

To; Bill Woodall; Dick Maddux; Don Grantham; Don Weloth; Hugh; Joe Leone; John Lawler; John McKiernan; Lamar Childs; Kyle Long; Pensacola News Journal

Opinion; Rex Baggett; Skip Giles;

Cc: editorial@eaa.org;

dof_support@freshfromflorida.com; Spaits, Mike GS12 USAF AFMC 96 TW/PA Subject: U. S. Air Force Gulf Regional Airspace Strategic Initiative (GRASI)

Greetings all,

The US Air Force has a proposal to use the Blackwater River State Forest to establish helicopter landing and drop zones, airstrips, and other land and air training activities to include 12 radar, telemetry, and training emitter sites in support of an integrated air defense system.

As a retired military member I can understand the importance of proper training for our service members, but if state parks and forests are restricted in any manner from use by the general public for military training activities then these areas in effect become military bases, and are no longer state parks or forests. Why do the citizens of Florida have to give up their state parks and forests without proper compensation or even a voice in this initiative?

The Air Force is having a scoping meeting in Milton on 27 August at 6PM: http://grasieis.leidoseemg.com/announcements.aspx

I encourage everyone to attend so we can see how General Aviation will continue to be choked out of existence in the panhandle of Florida by our good DOD neighbors. I ask everyone to forward this notice so our voice may be heard.

Lou Toth U.S. Navy Retired CFI

P.S. Maybe if the Air Force really wanted to be a good neighbor they would make their landing zones and airstrips open to the public through the Florida Park and Forest Service for air camping and fly ins, well we can always wish!

Scoping Written Comment Form

ENVIRONMENTAL IMPACT STATEMENT

U.S. AIR FORCE PROPOSAL FOR THE GULF REGIONAL AIRSPACE STRATEGIC INITIATIVE (GRASI) LANDSCAPE INITIATIVE (GLI)

Please submit scoping comments to the address below or via the GRASI Landscape Initiative EIS website (grasieis.leidoseemg.com) by September 12, 2013.

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Scoping Written Comment Form

ENVIRONMENTAL IMPACT STATEMENT

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Please submit scoping comments to the address below or via the GRASI Landscape Initiative EIS website (grasieis.leidoseemg.com) by September 12, 2013.

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or scan and email to:

spaitsm@eglin.af.mil

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Air Force GRASI Initiative Public Meeting – Milton, FL August 27, 2013

Because the route of the nationally designated Florida National Scenic Trail (FNST) extends across the panhandle of Florida and into Blackwater River State Forest to the Alabama line, the Florida Trail Association, which maintains these trails, asks that the US Air Force and the State of Florida give special consideration to the issues our chapters raise as an Environmental Impact Statement is developed for the GRASI project.

Protection of natural resources:

- 1. What will be the impact of using existing, or constructing new, airstrips and/or landing sites on plant communities such as pitcher plant bogs, and wildlife, especially rare and endangered species such as the red cockaded woodpecker and the gopher tortoise, or species, such as the Florida black bear, for which wildlife managers have been creating safe corridors to encourage diversity and protection of the species?
- 2. Will off-road vehicles be given the run of the forest during military exercises or will they be restricted to existing roads? Will additional roads have to be built to accommodate training exercises? If OHV are allowed, what impact will that have on native vegetation, creeks, rivers, and designated hiking trails?

Access for the Public

- 1. During military training exercises, will portions or all of the Forests be closed to the public, as currently happens with Eglin AFB?
 - a) Currently, hiking trails are available to the general public 24/7, 365 days a year. Closures would certainly have a negative impact on the unimpeded use of the forest by Florida citizens.

Safety and Wilderness Experience

- 1. Will military exercises be conducted on or near existing hiking trails or campground areas in the Forest which would increase the risk of a chance encounter between a family or a lone hiker and an armed participant in military gear?
 - a) Because the general public would find it frightening to see people in military uniforms with guns running through the Forest, we hope consideration will be given to exercises being conducted where there will be little/no chance for such an encounter during the day or at night.
- 2. Will live ammunition be used?
 - a) Due to hunting seasons, hikers already have to exercise vigilance during months when it is pleasant to be outdoors. Adding the danger of military exercises using live ammunition would be a further deterrent to the public wanting to use their state forests and recreation areas.
- 3. Will noise levels of helicopter or other aircraft landings and drops significantly increase, reducing the positive hiking/outdoor experience of the public?
 - a) Enjoying the calming quiet and sounds of nature are among the positive experiences that outdoor enthusiasts seek. This experience is already somewhat diminished by Whiting Field helicopter training flights.

Maps Available?

- Are there maps available showing the planned locations for the 12 radar, telemetry and training emitter sites?
 - a) Is the Air Force aware of whether any of those sites are close to the route of the FL National Scenic Trail (FNST)?
 - b) What, if any, impact will those sites have on people using the trails?
 - c) Will new roads need to be constructed to access those sites and will those require re-routing segments of the FNST?
- 2. The US Forest Service can provide GIS data for the FNST.
 - a) Since the Florida Trail Association is currently the organization that provides maintenance and development of the FNST and serves as the liaison with land managers, such as Blackwater River State Forest, we can aid in planning for the GRASI project if we are provided more detailed information on locations.

Questions/Concerns/Comments submitted by Helen Wigersma,

Chair, Western Gate Chapter, Florida Trail Association

Date: September 2, 2013

To: Mr. Mike Spaits
Eglin AFB Public Affairs Office
96 TW/PA, 101 West D Avenue, Room 238
Eglin AFB, FL 32452-5499
By way of email:

From:

Lynn C. Wilder, PhD, CIH

Re: Eglin GRASI EIS Scoping Period: Request for a Extension of the Public Comment Period (for a total of 90 days)

Dr. Mr. Spaits:

I was recently made aware of the public comment period for the GRASI EIS Scoping. While it is certain that the U.S. Air Force would prefer to move forward on this issue as quickly as possible, I respectfully request an extension of the public comment period so that the perspectives from stakeholders in our community can have a reasonable amount of time to offer comment and provide you with our concerns.

I am requesting this for the following reasons:

- The public meeting was not widely advertised. Although federal regulations were followed (e.g., federal register notice on August 12th), public advertising on a local radio station and a weekly news paper seems inadequate given the nature of your proposal.
- The public comment period includes a holiday week/weekend where many are preoccupied with family matters.
- The web page http://grasieis.leidoseemg.com was inaccessible for much of the Labor Day weekend (Saturday through mid-day Monday).
- Federal public comment periods vary, but they are usually for 30, 60, or 90 days.¹ Given the complexity and possible implications of air force activities, 30 days seems unreasonably short.
- Other federal agencies allow much longer than 30-day public comment periods for highly technical and complex matters.²
- The GRASI EIS impact on a national treasure is a highly complex matter and the details of proposed U.S. Air Force activities are very vague.

http://www.archives.gov/federal-register/the-federal-register/about.html

http://www.fcc.gov/encyclopedia/rulemaking-process-fcc

- Stakeholders include the local seafood industry, area tourism, the
 economy, local residents, and the health of Tate's Hell and the
 Apalachicola Bay. Our stakeholders are all intertwined. The local and
 national community should have more time to consider the implications of
 the "U.S. Air Force proposal to conduct training activities on state forests
 and to establish emitter sites in northwest Florida under the Gulf Regional
 Airspace Strategic Initiative (GRASI) Landscape Initiative."
- I question whether the U.S. Air Force can set a deadline for public comments on such a vague proposal—about 1 ½ columns in the Federal Register.

I urge the U.S. Air Force to be aligned with the Obama Administration's directive to "work together to ensure the public trust and establish a system of transparency, public participation, and collaboration." ³

Respectfully submitted,

Lynn C. Wilder

cc: Governor Rick Scott Rep Steve Southerland II Senator Bill Nelson Senator Marco Rubio FL Senator Bill Montford FI Rep Hasley Beshears

http://www.whitehouse.gov/the_press_office/TransparencyandOpenGovernment

TRANSCRIPTS

27 AUGUST 2013

SCOPING MEETING
GULF REGIONAL AIRSPACE STRATEGIC INITIATIVE
EIS STATEMENT
MILTON COMMUNITY CENTER
MILTON, FLORIDA

AUGUST 27, 2013

Transcript of public scoping meeting held August 27, 2013, beginning at 6:00 p.m. to 7:30 p.m. at Milton, Florida. Reported by Gertrude B. Downs, FPR.

APPEARANCES:

Mike Spaits Environmental Public Affairs Officer 96th Air Base Wing Eglin Air Force Base

Tom Tolbert 96th Test Wing Range and Air Space Sustainment Office Eglin Air Force Base

Gulf Bay Reporting
P.O. Box 2131
Panama City, Florida 32402
(850) 769-4853
1-800-761-4853

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MIKE SPAITS: If I could ask everyone to please, if you have a cell phone, please turn that to silent or vibrate, I'd appreciate that.

Good evening ladies and gentlemen, my name is Mike Spaits. I want to thank you for being with us at this public scoping meeting for the Environmental Impact Statement, or EIS, associated with the Gulf Regional Airspace Strategic Landscape Initiative, that's a lot, also known as GRASI Landscape, or Initiative, or GLI.

This public scoping meeting is being held in accordance with the provisions of the National Environmental Policy Act and the regulations that are published by the Council on Environmental Ouality.

Now what is scoping? Scoping is an early and open process for determining the scope of the issues to be addressed in the study. To ensure we provide an accurate public record, our presentation this evening is scripted. The purpose of this public scoping meeting is to provide you an opportunity to become familiar with the GRASI Landscape Initiative proposed action and to give you a chance to make comments regarding potential alternatives to the proposed action or issues that you recommend we

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address in the Environmental Impact Statement. This public scoping meeting serves as only one of several opportunities for public comment and involvement as part of the EIS process.

The public scoping meeting will be conducted in the two parts. First an Air Force presentation in which we present, discuss the Environmental Impact Analysis process, provide information on the detail of the proposed action and identify the anticipated timeline for the EIS. Following our presentation we'll take a short break and accept comments and questions from you, the public. Please make sure that you have submitted a comment card indicating that you would like to speak this evening. If you have not done so already, you will have an opportunity during the break. We will use the submitted cards to call commenters forward and ask that you state your name and any group that you represent if applicable. I'd also like to introduce Mr. Tom Tolbert to my right from the 96th Test Wing Range Planning Office at Eglin Air Force Base.

First I will provide an overview of the National Environmental Policy Act, NEPA, and the purpose of this scoping meeting. Mr. Tolbert will then provide information on the proposed actions and

alternatives, why they are needed, and how they were established by the Air Force. Afterwards I'll describe the environmental issues to be evaluated in the Draft EIS as well as the anticipated schedule, then we'll open the meeting up to comments.

As I mentioned, I'd like to begin with a brief introduction to the National Environmental Policy Act, or NEPA. NEPA requires federal agencies to consider potential environmental consequences of federal actions in order to make informed decisions. An environmental review is undertaken to determine whether the proposed project may have significant impact on the environment. If there is the potential for significant impacts then an Environmental Impact Statement, also known as an EIS, is required.

The NEPA analysis for this proposal will take the form of an EIS. This EIS will focus on impacts to the natural, physical and human environment associated with the proposed GRASI Landscape Initiative. The NEPA process makes sure that the environmental information is available to federal officials and citizens before decisions are made and actions are taken. NEPA implementing regulations contain detailed requirements for preparing

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environmental impact statements. For those interested, these are contained in 40 CFR 1500-1508 and 32 CFR Part 989.

In addition to the requirement to evaluate the potential environmental impact to the proposed action NEPA requires the Air Force to assess the potential environmental impacts of the reasonable alternatives. Tonight's meeting is important because the Air Force must consider reasonable alternatives identified during this scoping process and this is an opportunity for you to communicate options to the Air Force. Alternatives cannot be limited by the Air Force's ability to actually implement them. On the other hand, the Air Force is not required to consider highly speculative alternatives. Consistent with CEQ regulations the Air Force can limit the alternatives to a range that covers a spectrum of reasonable options regardless of the alternatives proposed and reviewed. The Air Force's decision regarding which alternative to select or how to proceed will not be made until public input has been considered and environmental analysis is completed. The Final Decision will be published in the Record Of Decision.

GULF BAY REPORTING

These scoping meetings are part of the NEPA

scoping process which is an early and open process that the Air Force undertakes to determine the scope of the issues to be addressed in this EIS, additional alternatives, and for identifying the significant issues related to the proposed action. During the scoping process NEPA requires the Air Force to notify the affected federal, state and local agencies, any affected Native American tribes, and the general public of the Air Force's proposal and its intent to implement the NEPA process. Scoping ensures the Air Force invites potentially affected agencies or persons to review the proposed action and to provide input regarding potentially significant issues.

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The scoping process began with the publication of a notice of intent to complete an EIS on this proposal in the Federal Register on August 12, 2013. Scoping takes place throughout the EIS process but in order for public comments to be considered in this Draft EIS for public review, comments must be postmarked by September 12, 2013. Your presence here tonight indicates your interest in this proposed action, and I hope your comments will improve our understanding of issues and impacts related to it so that they can be properly analyzed

and addressed in this EIS. Additionally, your comments will be used to develop the EIS and will become part of the administrative record for this document.

I would now like to turn the presentation over to Mr. Tom Tolbert who will provide information on the proposed action alternatives, why they are needed, and how they were established by the Air Force. Tom?

TOM TOLBERT: Like Mike said, I am Tom Tolbert.

I'm with the 96th Test Wing Range and Air Space

Sustainment Office at Eglin Air Force Base, and I'd like to thank all of you for taking the time to attend and participate in this important process.

So what is the Gulf Range Air Space Strategic
Initiative, also referred to as the GRASI? Our
military planners at Eglin realized that the region
needed a strategic vision and a coordinated approach
to enable the regional air space to function well.
The Department of Defense brought all of the
relevant stakeholders together for the Gulf Regional
Air Space Strategic Initiative, also known as the
GRASI, which is a collaborative effort between
military and civilian leaders to ensure the
availability of air space and near optimum use of

air space by civilians and the military.

The initiative documented the requirements of all airspace users to establish the strategic vision and model all the airspace in the region and recorded objectives for stakeholders to implement it. The GRASI resulting objectives included adding high altitude military airspace, improved air traffic management during busy periods, improving management facilities and communication and the focus of this EIS, which is expand the military capacity of the region. Additional information can be found at the web link there, and that web link can also be found in the handouts that you have in front of you.

The GRASI airspace model show that the demand of the military restricted areas are a limiting factor on the growth of military testing and training activity. Military restricted areas are areas of designated airspaces that restricts civilian access to support military ground or flight activities that could be hazardous.

Many of the activities planned are conducted in restricted areas or tied to nonhazardous ground activity not required to be accomplished on a range and that could be safely conducted outside of range

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property under special-use air space. These nonhazardous activities require only a small ground party or equipment but without permission to access other areas the DoD has had to conduct these activities in range and airspace reserved for these hazardous missions. To alleviate congestion in the restricted areas the Air Force decided to partner with willing public and private owners of large land parcels over 10,000 acres to investigate the potential for compatible military use.

So what is the GRASI Landscape Initiative, or the GLI? The Air Force began the GRASI Landscape Initiative with two strategies, partner with non-governmental organizations, state and federal agencies to acquire new working lands, to partner with owners of existing working lands to investigate the potential for military use. The Air Force began by reviewing all activities conducting — conducted in the limited restricted areas and documenting the numbers and types of operations that are or will be overtaxing the airspace. Planners then worked with the relevant stakeholders to identify opportunities for increasing military capacity in the region.

While the overarching goals of the GRASI Landscape Initiative addressed increased capacity throughout

the GRASI region are nonhazardous training activities such as ground maneuvers using helicopter landing zones and hazardous tests and training activities such as air-to-ground gunnery and live fire testing and training increased capacity for hazardous activities is in the initial planning stages and if carried forward would be addressed in separate NEPA documentation.

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The GRASI Landscape Initiative proposed action consists of two main components, establishment and use of up to 12 radar emitter sites throughout northwest Florida and using northwest Florida state forests for nonhazardous training activities. The proposed action is needed because hazardous testing activities use a lot -- utilizing restricted areas over Eglin Air Force Base have greater scheduling priorities than nonhazardous training activities occurring under these restricted areas. As a result, there are often scheduling conflicts for nonhazardous training.

The purpose of the proposed action is to build additional regional capacity for the type of nonhazardous operations that be -- that can be conducted outside these restricted areas. This will be accomplished through two types of partnerships,

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The Air Force will partner with the State of Florida to utilize Blackwater River or Tate's Hell State Forest for nonhazardous testing and training activities as needed. In addition, the Air Force would partner with Florida Forest Service and Florida Fish and Wildlife Conservation Commission for use of associated lands for placement of temporary and mobile training radar emitters.

Because complete implementation of these two partnerships may not add sufficient regional capacity other partnerships in areas are in the initial planning stages that are not ready for a decision and thus not evaluated in this EIS process.

The Air Force anticipates that establishing new pophazardous training areas, placing training

The Air Force anticipates that establishing new nonhazardous training areas, placing training emitters in remote locations would improve training outcomes through better scheduling and reducing the competing demands on the restricted areas. Under the no-action alternative the training activities identified under the proposed action would continue to occur on Eglin Air Force Base and neither state forests would be utilized nor would new emitters be established.

For the purpose of this EIS the decision to be made is whether to implement the proposed action,

again, to establish emitter sites throughout

Northwest Florida and conduct training activities at

Blackwater River and Tate's Hell State Forest and

any alternatives identified during the scoping

process, or the no-action alternative which again

would mean continuing all current training

activities at Eglin Air Force Base.

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Now, going to the details of the proposed action, a competent of the proposed actions is to establish up to 12 radar telemetry and training emitter sites throughout Northwest Florida to support development of a simulated integrated air defense system to be used for training. Radar telemetry emitters are used for tracking aircraft for navigation. The training emitters are radar simulator systems designed to help train military personnel identify and counter enemy missile or artillery threats from land or sea.

Types of emitters would vary depending on need, and their use would be determined by the constraints associated with each proposed site and respective operational parameters of the specific system. As an example, the use of a high-powered system with large safety hazard distances may be restricted at sites in close proximity to populated areas.

Typical radar and telemetry units would consist of Kineto tracking mount and mobile Cinetheodolite mount systems similar to those pictured on the slide.

The Air Force established the basic requirements for the emitter sites. Per these requirements the radar sites must be two and a half to three hour driving distance from Eglin Air Force Base, at least a third acre in size to accommodate equipment, accessible via improved roadways, able to accommodate adequate line of sight, example not surrounded by tall trees or utility poles or wires, with minimal improvements required, able to accommodate utility communication and security infrastructure without the need for — or for the — with supply ability of power and land lines fiberoptic with minimal improvements and should not be in close proximity to populated areas to minimize safety concerns or disturbances.

The Air Force chose to work with the federal and state agencies to identify sites meeting the requirements to save time and money. Seventy sites were originally identified, evaluated and narrowed down to the twelve sites assessed in this EIS. In the future, additional areas could be considered and

would be subjected to additional NEPA.

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The proposed emitter locations on this slide are shown by the red, blue, and purple dots on this map. The emitter sites would utilize Florida Forest Service and Florida Fish and Wildlife Conservation Commission lands via leasing agreements. The majority of the sites are associated with Florida Forest Service watchtower locations which are identified on this map in blue and are existing sites. Two sites are owned by the Conservation Commission and one site by Eglin Air Force Base. The two purple down on the south near Cape San Blas areas are those owned by the Conservation Commission, and the one in red over there south of Eglin Air Force Base is owned by the Air Force.

All sites are either improved or semi-improved and only a few would require additional improvements such as added fencing and/or tree clearing or topping. These sites would accommodate mobile and temporary use. The mobile use means that they would be used for day with operators on-site and while temporary use may last for several days but not all the proposed sites may be used and only several at any one time — any at one time would be operational.

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The training activity associated with the proposed actions consist of establishing helicopter landing and drop zones, airstrips and a number of different land and air training activities that are described in further detail in your handout and on the poster boards. I'd like to make note on this is that these sites are existing cleared areas in these forests and would rotate in accordance with the Florida Service Timber Management planning, i.e., a clear cut area is used for this activity, as it grows up, we don't use it. And existing roads would be used for airstrips, so establishment of airstrips is kind of misleading, so existing roads to support the small aircraft, that would be proposed for use. At both Blackwater River and Tate's Hell State Forest operators must adhere to respect the state

Forest operators must adhere to respect the state forest management plan requirements. In addition, no live munitions would be used. No substantive land disturbance would be allowed, such as land clearing, construction, and digging of pits, and personnel must collect all waste and used expendables.

Initially state forest land would be used for training perhaps only a few times annually and as the GRASI Landscape Initiative program becomes more

established, training activities would increase over time. As mentioned in the previous slides, the Air Force worked with state agencies in identifying potential sites for use. As part of this process, the Air Force set forth the following requirements for the training sites. They must be located with one and a half hour drive, or one hour flight time from Eglin Hurlburt Field to allow for day-trip training missions. The land area must have available road and infrastructure for access. The site should require minimal to no improvements, and the area must have available aircraft landing areas that require minimal to no improvements.

The only potential sites identified by the state agency to meet the requirements were the Blackwater River State Forest and Tate's Hell State Forest. While Tate's Hell State Forest exceeds the one and a half hour drive time from Eglin and Hurlburt Field locations it is within the one hour flight time and as a result has been carried forward as an alternative. However, due to the driving distance, Tate's Hell State Forest would be used infrequently for ground training and no other alternatives for training sites that were identified have met the requirements. As a result, no other

alternatives were considered.

The Air Force proposes to utilize Blackwater River and Tate's Hell State Forest via a lease and through agreements with the Florida Forest Service. For the purposes of this EIS, each state forest has been divided into tactical areas which correlate to each state forest recreational area as shown in the two maps that follow. Training activities may occur in any of the tactical areas with consideration of restrictions identified via coordination with the Florida Forest Service during the planning process as well as any constraints or mitigations identified in this EIS.

This map shows the tactical areas identified for Blackwater River State Forest. All the various areas shaded in green are associated with Blackwater River State Forest. This map's also provided in your handout. Personnel would travel to Blackwater River State Forest either by road or aircraft as part of a training exercise.

This map shows the tactical areas identified for Tate's Hell State Forest, all the areas shaded in the various greens and browns, and because of the distance from Eglin Air Force Base, approximately 150 to 200 miles depending on the route taken, the

road traveling to Tate's Hell State Forest would be infrequent and most training activities would be associated with air transport of personnel and equipment to Tate's Hell State Forest tactical areas.

I'd now like to turn the meeting back over to Mr. Mike Spaits with the 96th Test Wing Public Affairs Office.

MIKE SPAITS: Thanks Tom.

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The goal of the analysis of this EIS is to assess potential impacts to the human and natural environment associated with the proposed action, and identify operational constraints to minimize or avoid potentially adverse impacts to the extent practicable. Decision makers will then consider this information in order to make informed decisions. For each alternative considered in this proposal, the proposed action, the no-action alternative and any alternatives identified during the scoping process, the Draft EIS will discuss the potential impacts on the environmental resources identified on this slide.

In front of you is the current schedule for this EIS. As discussed, the Air Force published a notice of intent to prepare an EIS in the Federal

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Register on August 12th and is currently in the scoping process with public scoping meetings being held this week. After the public scoping meetings public comment period ends, the Air Force will prepare the Draft EIS. Now during the entire NEPA process comments will be accepted, however, there are deadlines to make it into the printed versions of the document.

Considering public comments received during the scope period will be re -- refining the proposed action alternatives, gather information about the affected environment, and analyze the potential impacts to the resource areas on the previous slide. The Draft EIS is anticipated to be published late this year or in early 2014 with a 45-day public review and comment period to follow. During this time public hearings will be held during the 45-day public review period. Public hearings will be held for the public to review the Draft EIS findings and to provide comments. At the end of the Draft EIS public review 45-day period, the Air Force will respond to comments, modify the EIS if needed and publish the final document in the spring of 2013 (sic). No sooner than 30 days after the Final EIS is released to the public, the Air Force expects to

sign a Record of Decision. The Record of Decision will state whether the proposed action will be implemented and which alternative has been selected.

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This concludes the Air Force presentation, and we'll soon begin the public comment portion of the evening where we will hear your comments and concerns. If you would like to speak and did not already sign up, please do so during the short break at the speaker where the sign-in table when you first came in, in the foyer area. Elected officials will speak first. Agency and organizational representatives will speak second, then private citizens in the order that you signed up. In the interest of time and to accommodate everyone, we ask you to limit your comments of — to a reasonable period.

You may also visit the GRASI Landscape
Initiative EIS website at the location identified on the screen and in your handouts to submit your written comments. All comments verbal and written will become part of the official administrative record. For written comments, comment sheets are available at the comment table. Please turn in completed comment sheets at the end of the evening or by mail or e-mail. We welcome public comments in

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writing at any time during the EIS process, however, to receive time and consideration in the Draft EIS we encourage you to provide scoping comments no later than September 12, 2013.

To see a copy of the Draft EIS please indicate your preference on the comment sheet or just notify us by phone, mail, or e-mail. The Draft EIS copy will be distributed as CDs and DVDs, and the CDs and DVDs will also be available at local libraries and on the web at the GRASI EIS website. So if you don't receive one or if you don't want to receive it by mail, you can go on line and read it. So I ask you to please direct your comments and questions to the address or website shown on the screen.

Now I'd like take a quick five-minute break before we begin the public comment portion of the evening. So if -- there's restrooms right outside the door here to the right. So if you didn't have a chance to sign up, or you weren't sure whether you wanted to speak or not and you do now, please sign up at the entrance where you came in, and we'll see everybody back here in about five minutes.

(Intermission)

MIKE SPAITS: Folks, if we could, we need to re-take our seats so we can resume the public

comment portion of the meeting this evening.

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Okay, we've now reached the second part of this public scoping meeting which is your opportunity to provide the Air Force with your comments and make statements for the record. A court reporter is recording everything stated during the public scoping meeting. Again, the purpose of this comment portion of the scoping meeting is to collect relevant information or questions regarding issues that should be addressed in our analysis. To that end, we are here to accept your comments, but we will not engage in debate or discussion on the merits of the proposal we're analyzing, nor is the scoping and comment period designed as a question or answer period. Nevertheless, you may identify issues, additional alternatives or raise questions that need to be investigated for this EIS.

You can officially comment in several ways.

You can speak now and have it recorded by the court reporter, you can provide comments in writing by submitting them during this public scoping meeting to any Air Force representative, or you can go home, collect your thoughts and send it by mail or e-mail. You can give extended written comments to the -- excuse me, you can give extended oral comments to

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the court reporter after the official comment period is over.

Elected officials, well, we don't have elected officials tonight so we're going to skip that part. What I'll do is I will announce your name and ask you to please step up to the microphone here in the center, speak clearly and slowly so that I can hear your comments and so that the court reporter can easily record your statement. I want you to state your full name and spell it out so we can record it properly. If you are representing someone or some group other than yourself, please let us know this information to make sure the court reporter gets an accurate record. Please do not provide any personal information in your comments that you would not want to see published in the EIS.

Each person — we only have four folks signed up to comment so I'm just going to go ahead and get started with that. And I'm sorry if I butcher anybody's names. The light in here is terrible.

So, Kay Rasmussen with the Economic Development Council of Okaloosa County, and the Defense Support Initiative.

KAY RASMUSSEN: Thank you, Mr. Spaits, Mr. Tolbert. Kay Rasmussen, R-A-S-M-U-S-S-E-N, Vice

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          President for the Economic Development Council of
 2
          Okaloosa County and the Tri-County Defense Support
 3
          Initiative.
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               Both the Economic Development Council, EDC, and
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          Defense Support Initiative, DSI, have been long-time
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          supporters of GRASI. I had the honor of supporting
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          the GRASI Executive Committee following its
          inception after the '05 BRAC Commission.
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               The Economic Development Council, EDC, and the
          Defense Support Initiative, DSI, now support the
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          Landscape Initiative. Both the GRASI and its
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          Landscape Initiative focus on ensuring the
          effective, efficient and safe operations and
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          activities for both the military and communities --
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          civilian communities and residents. As such, we
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          pledge our continued strong support for the GRASI
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          Landscape Initiative, and we thank you for your
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          efforts.
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               MIKE SPAITS: Thank you. Miss Helen --
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               HELEN WIGERSMA: Wigersma.
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               MIKE SPAITS: -- how do you do that? Wigersma?
             HELEN WIGERSMA: Not too close.
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               MIKE SPAITS: With the -- with the West Gate
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          Florida Trail Association.
25
               HELEN WIGERSMA: We answer to most anything I
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can tell you.

MIKE SPAITS: Okay.

HELEN WIGERSMA: But I do spell it. It was the first thing that my kids learned to do when they were born.

Hi, my name is Helen Wigersma, you were so close, and I'm here this evening representing the Western Gate Chapter of the Florida Trail
Association. We are one of 18 chapters of volunteers throughout the state who have the responsibility for maintaining and development of the Florida National Scenic Trail. And if there's a possibility you might not be aware of the Florida National Scenic Trail it's a 1,300 mile foot path that begins at Fort Pickens in Gulf Islands National Seashore, goes all the way across the Panhandle and down the peninsula to Big Cypress Nature Preserve down by Miami. You're welcome to come hike with us any time.

We work with multiple land partners across the state and in our area. Two of our key land partners are certainly Blackwater River State Forest and Eglin Air Force Base. We are very appreciative of Eglin Air Force Base because it has been critical for allowing us to get some of our trail off what we

call road walk and actually into the woods and so one of my sister chapters, Choctawhatchee Chapter, has actually been the ones that have been developing and working with that trail. But with that in mind, with Blackwater River State Forest, we have what's called a Florida National Scenic Trail side trail that goes from basically what's called the Yellow River Ravines north to the Alabama line through Blackwater River State Forest. And our concerns lie with the issues that may impinge and impact our trails as they exist across the Panhandle and as they exist going up to the Alabama line in Blackwater.

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I'm sharing with you some of the comments that have been shared with me by members, and we appreciate that you're going to have an extended period until September 12th for others of our chapters to be able to go ahead and provide comment to you based on the information that you're providing this evening, because even some things I've heard speak to issues that have been raised, but let me just go ahead and point out some of the concerns that we have.

GULF BAY REPORTING

protection of natural resources, and with that we're

We obviously have a major concern with

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talking about everything from protection of the very special Pitcher Plant prairie bogs that are in our forests. Again, that's a unique feature and something that we would hate to see negatively impacted by activities that would go on within the forest by the military or any other group. Also we're concerned about species that are endangered or rare species. And certainly with Eglin Air Force Base you're well familiar with, already with the red cockaded woodpecker because Eglin has been instrumental in going ahead and developing and growing that population, as have our friends at Blackwater State Forest. But it is a concern about making sure that noise or activity that may go on may impact negatively the -- the breeding habits and any of the natural habitat that might be disturbed by activities that would go on.

One of the concerns that we have is whether there will be off-the-road vehicles, ATVs, OHBs, that would be allowed to go off existing roads because that's a concern for us as to whether they would be causing erosion that might occur off roadway. So that is another concern that we have, and I've been looking at your charts and it looks like it says they have to stay on roads that are

approved by the forest, so that's a positive. But I did want to mention that, that is one of the concerns that has been raised.

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From the standpoint of -- oh, I should mention our waterways as well. That has been a concern. If in fact, just for example, if there's a bridge that would go across a river or creek but the military operation would instead tell them that it's okay to go down and go on the side of the bridge, erosion that would occur around creeks and streams, so our waterways we'd also want to see protected.

Access for the public, we're well familiar with with what happens with Eglin Air Force Base on indication when they have to close the base. We're aware of that. We know that's going to happen on an Air Force base. Our concern is that there may be times that the public would be precluded from using some portion of the forest because a military operation is going on at that time. We're hopeful that, that won't happen, that we'll be actually having areas being closed but again, we would ask for your sensitivity as you look at the environmental impact on the lack of access to the forest during some periods of time.

GULF BAY REPORTING

Safety in the wilderness experience, we are the

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kinds of folks, we want to be out in the woods. We want to be out there where supposedly we have quiet where we can think our own thoughts, where we can hear the songbirds, and frankly we're a little concerned about what the operations might actually lead to, because we are aware of helicopter noise. Whiting Air Force Base is also not far from us, so sometimes I've told young people about, oh, come out with us on a hike. We're going to have a wonderful day. We'll have a quiet period, and we're hearing tunk, tunk, tunk, tunk. But anyway, that is a concern we have is about the amount of noise that may be generated by some of these kinds of activities. We also ask about the -- the -- we're concerned about risks of encounter with military personnel by families that are out, thinking they're out for a day, and we're concerned that we may have people instead that are out there, military people, don't

know if they'll be carrying weapons or not, but those kinds of encounters, if they have a negative impact or experience for anyone using the forest.

I have will live ammunition be used? I've already seen on your sheet that that's not the case. Now, if we could only get the hunters not to use

live ammunition we'd be in good shape. But anyway -- let's see, that takes care of that.

One of the things I needed to let you know about is that we were concerned about where the emitters and the radar installations might be going in. I now have seen that on the sheet, and I think that we probably don't have any issues with it, but we were concerned about whether any of the sites might in fact require that we would re-route a portion of the Florida National Scenic Trail. It doesn't appear that that's the case, but it is another issue that we would ask you to look at as you're considering expanding on this program.

And I also wanted to let you know that we are certainly offering, and this would be through the US Forest Service, any GIS data or information that you might need about where the actual route of the Florida National Scenic Trail is. As you're planning operations, it would be good for you to be aware of where that is. We have that data. The Florida Trail Association can work with you, but ultimately we'd be working with people you're already working with the US Forest Service.

So those are the comments that I wanted to share this evening. I have given a, these written

1 comments, I have gone ahead and placed them back 2 here. But again, I do want to express appreciation to the Air Force because they have been great 3 4 partners at Eglin Air Force Base, and we're grateful 5 for them. They've even helped us get some more 6 buffer lands when they recently -- our state of 7 Florida went ahead and bought some land in Seven 8 Runs and the Cosi Plantation area. So thank you 9 very much for this opportunity. MIKE SPAITS: Yes, ma'am, thank you. I'd like 10 11 to now call Mr. Lou Toth? 12 LOU TOTH: Hi, Lou Toth, T-O-T-H, and did you get the spelling? 13 14 I'm just a concerned citizen who is also a 15 flight instructor and, you know, the previous 16 speaker talked about equal public access and right 17 now there's a, an airfield used by the Florida 18 Forest Service just north of Munson. It's known as 19 the Blackwater Airfield. The Forest Service calls 20 it, you know, Eight Foxtrot Delta Three. They use 21 it for fire suppression and things like that. I 22 know you guys need it for training. The Forest 23 Service does allow on some occasions for general 24 aviation aircraft to go in there but not very much, 25 okay, maybe once or twice a year. Well, if the Air

Force is going to be using that public airport to the extent that they're going to be using it, it has to be open at least that much or more to the general public because it is on public lands.

You did talk about some of the airspace uses and that there would be not any additional special use of airspace. Let's hope that, that holds.

There shouldn't -- I mean there's already MOAs and everything else going through there, all sorts of training routes and stuff like that. Don't need anymore of that on the public lands.

And I did talk with Mr. Core (phonetic), who is the assistant director of the Florida Forest Service, and he agreed that however much the Air Force is going to use that airfield, and I know the Air Force is going to be doing the upkeep and things like that, that the public should be allowed at least that much access. And we understand that, you know, during certain training times you may not want the public to be there and because of that, you know, I did speak with Mr. Penman? I hope I said that right. That it would probably be a great thing if, you know, the Air Force took over the scheduling of this and made it such that we would know when the Air Force is going to use it and when the public can

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          use it. There is a campsite just to the southwest
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          of the, that little airstrip. It would be great for
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          air camping or whatever. You know, it would be open
          on weekends but maybe closed during the week or at
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          nights or something like that. But I think a lot of
          the people here who fly -- fly general aviation
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          airplanes would love to go up there and that's the
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          only thing I wanted to add. Thank you.
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               MIKE SPAITS: Thank you, sir. And Ms. Carol
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          Tebay?
              CAROL TEBAY: Good evening, Carol Tebay,
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          T-E-B-A-Y, and I just wanted to speak to the vehicle
          stream and wetland crossings and the erosion that it
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          might cause. Can you speak to that? Tell us a
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          little bit more about it?
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               TOM TOLBERT: Well, we're going to work with
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          the Florida Service and identify areas that are
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          acceptable for that. We're not -- our intent is not
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          to create additional erosion concerns outside of
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          what may already exist naturally.
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              CAROL TEBAY: Do you know which bodies of water
          would be involved?
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               TOM TOLBERT: No, ma'am.
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              CAROL TEBAY: Well, that would be my concern.
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               TOM TOLBERT: Okay.
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               MIKE SPAITS: Thank you. That's all the folks
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          that have signed up to speak. Is there -- if
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          there's anybody else then we are going to -- I'm
          sorry, we have a late comer. Great, Mr. -- Ms. --
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          Mr. Kean Engie? Did I say it right?
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               KEAN ENGIE: Yeah. My name is Kean Engie,
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          K-E-A-N E-N-G-I-E. I'm the publicity chair for the
          Western Gate of Florida Trail.
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               My question is, we plan our activities for
          the -- six six months ahead for the hiking trail
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          mainly on the weekends as well as on Thursday to do
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          trail maintenance, so I was just wondering when we
          will know what -- where your activities are so that
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          we don't get into interference with our trail
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          activities when we organize those trail activities,
16
          especially on the weekends, whether you will publish
17
          a list of your activities and locations, especially
18
          the Blackwater through the state parks.
19
               TOM TOLBERT: We will definitely work to make
20
          that type of information available, working with the
21
          Florida Service because we actually need to make
22
          sure they know what and where we're doing things --
23
               KEAN ENGIE: Yeah.
24
               TOM TOLBERT: -- so they can inform the right
25
          folks and then we can certainly take a look and
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1
          include the right information flow that you may
 2
          need.
 3
               KEAN ENGIE: So you -- if we can have say four
 4
          to six months ahead so we can plan.
5
               TOM TOLBERT: We can take a look at it.
6
             KEAN ENGIE: Yeah. Thank you.
7
             MIKE SPAITS: Thank you.
               That's all now? That's all that signed up so
8
9
          unless we have any -- going once, going twice. Well
          I want thank everyone for coming out. Hang on
10
          there's more script here.
11
12
               Okay, I would like to remphasize that this
          meeting is not the end of your opportunity to
13
14
          participate in the environmental review process.
15
          The preparation of the EIS is an ongoing process and
16
          as such, you can provide comments at any time
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          throughout its development. If you have not had an
18
          opportunity to do so, I encourage you to take a look
19
          at the display boards we have provided and speak to
20
          some of the planners that we have here if you have
          additional questions. And on behalf of the
21
          environmental planning team, I thank you for your
22
23
          attendance, and thank you for your participation.
24
          (Conclusion of scoping meeting at 7:20 p.m.)
25
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STATE OF FLORIDA COUNTY OF BAY

REPORTER'S CERTIFICATE

I HEREBY CERTIFY that the foregoing is a true and accurate transcript of the public scoping meeting for Eglin Air Force Base held August 27, 2013, at Milton Community Center, Milton, Florida.

I FURTHER CERTIFY that I was authorized to and did report the foregoing proceeding and that the transcript is a true and complete record of my stenographic notes.

DATED this the 2nd day of September 2013.

Gertrude B. Downs

28 AUGUST 2013

SCOPING MEETING
GULF REGIONAL AIRSPACE STRATEGIC INITIATIVE
EIS STATEMENT
BLOUNTSTOWN CIVIC CENTER
BLOUNTSTOWN, FLORIDA

AUGUST 28, 2013

Transcript of public scoping meeting held August 28, 2013, beginning at 6:00 p.m. to 7:00 p.m. at Blountstown, Florida. Reported by Gertrude B. Downs, FPR.

APPEARANCES:

Mike Spaits Environmental Public Affairs Officer 96th Air Base Wing Eglin Air Force Base, Florida

Tom Tolbert 96th Test Wing Range Planning Office and Air Space Sustainment Office Eglin Air Force Base, Florida

Col. Shawn Moore Commander 96th Civil Engineer Group Eglin Air Force Base, Florida

Mike Penland US Pentagon Department of the Air Force Washington, DC

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COL. SHAWN MOORE: Good evening everybody. Can you hear me? Here we go.

I'm Col. Shawn Moore. I am the 96th Civil
Engineer Group Commander at Eglin Air Force Base,
and on behalf of Brigadier Gen. David Harris, the
96th Test Wing Commander, I thank you for being in
attendance this evening.

exactly what this initiative is all about and so I'm just going to set a small formal review here to set the stage for what you're about to be briefed on and presented to you this evening which will provide you with a complete open forum so you can understand what the Air Force is doing about — specifically at Eglin Force Base through the partnership that we have with the forestry service and other agencies here in Florida for the best information needs all within the understanding the importance of the environment and addresses concerns and issues you might have.

What we have before you is a formal process in accordance with the laws of NEPA, the National Environmental Protection Act, so I just want to allay any concerns you might have. This is not a land grab. Otherwise we have — we want you to see

that the -- Eglin Air Force Base is not out to grab land. I know you're interested to see what this is so please ask or notice here we brought down Mr. Penland who is the air staff proponent from the Pentagon. He's going to talk a little bit more specifics about this particular initiative and then I'm going to have to hand this off to Mr. Spaits and Mr. Tolbert who will go through one of the more formal procedures to make sure it's all very specific in our approach and presentation to you, as we have done so in the Milton in the previous presentation last night, and we'll have another presentation tomorrow night in Apalachicola before we get started with this initiative. So with that, I ask for your attention and your vocal comments at the end. We have some boards here tonight if you haven't had a chance yet to speak with our subject-matter experts here. They've had several people talking to

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them, and we'll certainly address your concerns and any questions you might have. So with that, Mr. Penland?

MIKE PENLAND: Thank you, sir.

I'm Mike Penland. I'm with the Air Force in the Pentagon. Real quick, I just wanted to say that

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when we first started this several years ago when we first talked to the forest service, we actually went to them with a proposition and said we've got some things that we need to try to work out, some missions we need to try to get requirements done for, and we want to try to do something new. We want to try to approach you guys with this, with maybe a new idea. We want to see if there are compatible areas out there. When we think of things that we think are compatible, but we want to make 10 sure that you guys think they're compatible. So there are certain missions that we call nonhazardous where it's, you know, guys walking around and doing those kind of things (inaudible). But the forest service was very supportive. We worked really hard with those guys to come up with some areas that we think are compatible mission areas that are no impact. I want to underline that, we -- our intent is to not impact anybody. And I told the forest service straight up first thing, if there are areas that we can't use because of hunting or all of the different things that go on here in the state of Florida, please let us know that, and we'll see if there are some other areas that are compatible. So when you see this, keep that in mind, that we are

looking forward to compatible areas that — with no impact with the public, because we don't want to cause an impact. And I will be here the whole time, and if after this scripted presentation you have questions, please let me know. Or if there are some folks around who are here who have some questions as well.

Thank you, sir.

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MIKE SPAITS: Thank you, Colonel.

First I want to apologize. We started a little early, and we actually don't start until 6:30. That was my fault. I apologize. So we're going to take this time now, the next 20 minutes or so, for you to be able to mingle in the boards, ask your questions and then we'll actually physically start the presentation at 6:30. Thank you.

(A break was taken.)

MIKE SPAITS: Okay, since we already welcomed everyone, and we had no new visitors since then we'll go ahead and start the meeting now. First I'd like to ask everyone to please set their cell phones to vibrate or silence.

Good evening and thank you for being with us at this public scoping meeting for the Environmental Impact Statement, or EIS, associated with the Gulf

Regional Airspace Strategic Landscape Initiative, also known as the GRASI Landscape Initiative, or GLI. My name is Mike Spaits, and I'm the Environmental Public Affairs Officer for Eglin Air Force Base, and with me is Tom Tolbert, and he's with the 96th Test Wing Range Planning Office.

This public scoping meeting is being held in accordance with the provisions of the National Environmental Policy Act and the regulations that are published by the Council on Environmental Quality.

What is scoping? Well, scoping is an early and open process for determining the scope of the issues to be addressed in this study. The purpose of this public scoping meeting is to provide you an opportunity to become familiar with the GRASI Landscape Initiative Proposed Action and to give you a chance to make comments regarding potential alternatives to the proposed action or issues that you recommend we address in the Environmental Impact Statement. This public scoping meeting serves as one of several opportunities for the public to comment and involvement is part of the EIS process.

The public scoping meeting will be conducted in the two parts. First the Air Force presentation in

which we will discuss the environmental impact analysis process, provide information on the details for the proposed action and identify the anticipated time line for the EIS. Following the Air Force presentation we will take a break and then accept comments and questions from you. Please make sure that you have submitted a comment card indicating that you would like to speak this evening. If you have not already done so, you can sign up to speak during the break. We will use the submitted cards to call the commenters forward and ask that you state your name and any group you represent if applicable.

At this time I will provide an overview of the National Environmental Policy Act, NEPA, and the purpose of the scoping process. Afterwards

Mr. Tolbert will then provide information on the proposed action and alternatives and why they're needed and how they were established by the Air Force. Afterwards I'll describe the environmental issue to be evaluated in the Draft EIS as well as the anticipated schedule, then we'll open the meeting to the public comment.

As I mentioned, I'd like to begin with a brief introduction of NEPA. NEPA requires Federal

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agencies to consider potential environmental consequences of federal actions in order to make informed decisions. An environmental review is undertaken to determine whether the proposed project may have a significant impact on the environment. If there is the potential for significant impacts then an environmental impact statement, also know as an EIS, is required. The NEPA analysis for this proposal will take the form of an EIS. This EIS will focus on impacts to the natural, physical, and human environment associated with the proposed GRASI Landscape Initiative. The NEPA process makes sure that the environmental information is available to federal officials and citizens before decisions are made and actions are taken. NEPA implementing regulations contain detailed requirements for the preparing of the Environmental Impact Statements. For those interested, these are contained in 40 CFR 1500-1508 and 32 CFR Part 989. In addition to the requirement to evaluate the potential environmental impacts of the proposed

In addition to the requirement to evaluate the potential environmental impacts of the proposed action NEPA requires the Air Force to assess the potential environmental impacts of the reasonable alternatives. Tonight's meeting is important because the Air Force must consider reasonable

alternatives identified during the scoping process, and this is an opportunity for you to communicate options to the Air Force. Alternatives cannot be limited by the Air Force's ability to implement them. On the other hand, the Air Force is not required to consider highly speculative alternatives. Consistent with CEQ regulations the Air Force can limit the alternatives to a range that covers the spectrum of reasonable options. Regardless of the alternatives proposed and reviewed, the Air Force's decision regarding which alternative to select or how to proceed will not be made until the public input has been considered and the environmental analysis is completed. The Final Decision will be published in a Record of Decision. These scoping meetings are part of the NEPA Scoping process which is an early and open process that the Air Force undertakes to determine the scope of issues to be addressed in the EIS, additional alternatives, and for identifying the significant issues related to the proposed action. During the scoping process NEPA requires the Air Force to notify affected federal, state and local agencies

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GULF BAY REPORTING

general public of the Air Force's proposal and its

and any affected Native American tribes, and the

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intent to implement the NEPA process.

Scoping ensures the Air Force invites potentially affected agencies or persons to review the proposed action and to provide input regarding potentially significant issues. The scoping process began with the publication of a Notice of Intent to completing the EIS on this proposal in the Federal Register on August 12, 2013. Scoping takes place throughout the EIS process but in order for your comments to be considered in the Draft EIS for public review, comments must be postmarked by September 12, 2013. Your presence here tonight indicates your interest in this proposed action, and I hope your comments will improve our understanding of the issues and impacts related to it so that they can be properly analyzed and addressed in this EIS. Additionally, your comments will be used to develop the EIS and will become part of the administrative records for this document.

I would now like to turn the presentation over to Mr. Tom Tolbert who will provide information on the proposed action alternatives, why they are needed, and how they were established by the Air Force. Tom.

TOM TOLBERT: Like Mike said, I'm Tom Tolbert.

I'm a range planner in the 96th Test Wing Range
Airspace Sustainment Office. I'd like to thank
those of you that took time out of your schedule to
attend and participate in this important process.
Thank you.

Strategic Initiative, also referred to as a GRASI? The military planners at Eglin Air Force Base realized that the region needed a strategic vision and a coordinated approach to enable the regional airspace to function well. The Department of Defense brought all of the relevant stakeholders together for the Gulf Regional Airspace Strategic Initiative, also known as the GRASI, a collaborative effort between military and civilian leaders to ensure the near opti — optimum use of airspace by civilians and the military.

The initiative documented the requirements of all airspace users and established a strategic vision, modeled all the airspace in the region and recorded objectives for stakeholders to implement.

GRASI resulting objectives included adding high altitude military airspace, including air traffic management during busy periods, improving the management facilities of communication, and

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expanding the military capacity of the region which the -- this is the, obviously GRASI Landscape Initiative's final objective.

Additional information about the GRASI can be seen in the web link identified there. It's also in your handouts.

The GRASI airspace model shows that the noted demand on the military restricted areas puts a limiting factor on the growth of the military testing and training activity. Military restricted areas are designated airspaces that restrict civilian access to support military and ground or flight activities that could be hazardous. Further amenities of the activities planned are conducted in the restricted areas are tied to nonhazardous ground activity not required to be accomplished on a range and that could be safely conducted outside of the range property under special-use airspace. These nonhazardous activities require only a small ground party or equipment, but without permission to access other areas the DoD has had to conduct these activities in range and airspace required for hazardous missions.

To alleviate congestion in restricted areas the Air Force decided to partner with willing public and

private owners with large parcels of land, over 10,000 acres, to investigate the potential for compatible military use.

So what is the GRASI Landscape Initiative, or the GLI? The Air Force began the GRASI Landscape Initiative with two strategies, to partner with non-governmental organizations, states, and federal agencies to acquire new working lands and partner with owners of existing working lands to investigate the potential for military use. The Air Force began by reviewing all activities conducted in the limiting restricted areas, anddocumented numbers and types of operations that are or will be overtaxing the airspace. Planners then worked with the relative stakeholders to identify opportunities for increasing military capacity in the region.

While the overarching goals of the GRASI
Landscape Initiative address increased capacity
throughout the GRASI region for nonhazardous test
and training activities such as ground maneuvers and
using helicopter landing zones and hazardous tests
and training activities such as air-to-ground live
fire testing and training increased capacity for
hazardous activities is in the initial planning
stages and if carried forward, will be conducted in

a separate paper documentation.

The GRASI Landscape Initiative proposed action consists of two main components, establishment, use of up to 12 radar emitter sites throughout northwest Florida and using northwest Florida state forests for nonhazardous training activities.

The proposed action is needed because hazardous testing activities utilizing restricted areas over Eglin Air Force Base have greater scheduling priorities than nonhazardous training activities occurring under restricted areas, and as a result there are often scaling — scheduling conflicts for nonhazardous operations. The purpose of the proposed action is to build additional regional capacity for the type of nonhazardous operations that can be safely conducted outside of restricted areas.

This will be accomplished through two types of partnerships. The Air Force will partner with the State of Florida to utilize Blackwater River and Tate's Hell State Forest for nonhazardous testing and training activities as needed. In addition, the Air Force would partner with Florida Forest Service and Florida Fish and Wildlife Conservation

Commission for use of associated lands for placement

of temporary and mobile training emitters. Because completing implementation of these two strategies or partnerships may not have sufficient retail capacity other partnerships in the areas are in the final initial planning — are in the initial planning stages but are not ready for a decision and thus not evaluated in this EIS process.

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The Air Force anticipates that establishing new nonhazardous training areas and placing training emitters in remote locations would improve training outcomes through better scheduling and reducing competing demands on the restricted areas. Under the no-action alternative training activities identified under the proposed action would continue to occur on Eglin Air Force Base and neither state forests will be utilized nor would there be newer sites to be established.

For the purposes of this EIS, the decision to be made is whether to implement the proposed action, which is to establish emitter sites throughout northwest Florida and conduct training activities at Blackwater Rive and Tate's Hell State Forests and any alternatives identified during the scoping process, or the no-action alternative which again would be continuing all current training activities

at Eglin Air Force Base.

Now I'll go into the details of the proposed action. The component of the proposed action is to establish up to 12 radar telemetry training emitter sites throughout northwest Florida to support development of a simulated integrated air defense system to be used for training. Radar and telemetry emitters are used for tracking aircraft and navigation. The training emitters are radar simulator systems designed to help train military personnel identify and encounter enemy missile or artillery threats from land or sea.

The types of emitters would vary depending on need. They usually would be determined by their strengths associated with each proposed site to respect -- respective operational parameters of the specific system. As an example, the use of high powered systems for large safety hazard distances may be restricted to sites in close proximity to populated areas. Typical radar and telemetry units would consist of Kineto tracking mount and mobile Cinetheodolite mount systems similar to those pictured on the slide.

The Air Force established basic requirements for the emitter site locations. Per these

requirements the radar sites must be within two and a half to three hour driving distance from Eglin Air Force Base, 0.75 acres in size, accessible via improved roadways, able to accommodate adequate line of sight and not surrounded by tall trees or utility poles or wires with minimal improvements required, also able to accommodate utility communications and security infrastructure such as power lines, land lines and fiberoptics with minimal improvements and should not be in close proximity to populated areas to minimize safety concerns and disturbances.

The Air Force chose to work with the federal and state agencies to identify sites meeting these requirements to save time and money. Seventy potential emitter sites were identified, evaluated and narrowed down to the twelve sites assessed in this EIS and identified in the next slide. The future additional areas with the decision would be subject to additional NEPA analysis.

Emitter sites will utilize Florida Forest
Services and Florida Fish and Wildlife Conservation
Commission lands via leasing agreements. The
majority of these sites are associated with Florida
Forest Service watchtower locations which are
identified in blue on the map and are also

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identified in your handout. While two sites are owned by the Conservation Commission which are in purple down here, the San Blas area and one site by Eglin Air Force Base which is identified over here in red, all sites are either improved or semi improved and only a few would require additional improvements such as added fencing or tree clearing or topping.

Training activities associated with the proposed actions system utilizing areas previously cleared by the forest service for helicopter landing and drop zones utilizing existing forest roadways for airstrips, conducting a number of different land and air training activities are described in further detail in your handout and on poster boards. These activities currently occur on the Eglin Air Force Base range within the areas between designated test training sites. The points to be made with this -these areas being proposed for the helicopter landing and drop zones are existing cleared areas in forest service areas of timber management activities and would rotate in accordance with those practices. So if an area was cleared, we would use it until it started to grow and then if they would not allow us to use it, we'd move to an area that was recently

cleared to do some more activities. And for the purpose of the airstrips, existing roads would be utilized to support that activity.

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At both Blackwater River and Tate's Hell State Forest operators must adhere to respective state forest management plan requirements, and in addition no live munitions would be used and no substantive land clearing or disturbance would be allowed, and any construction or digging of pits is not authorized. There would be no off-road vehicle use and personnel must collect all waste and used expendables. Training activities would avoid impacts to protected species and habitats such as the red cockaded woodpecker and Pitcher Plant bogs. Finally, the Air Force would coordinate with the Florida Forest Service to schedule activities so that impacts to the public, such as campers, hikers and hunters would be avoided, and to notify recreational users of any activities prior to their occurrence.

Initially state forest lands would be used for training perhaps only a few times annually and as the GRASI Landscape Initiative program becomes more established, training activities would increase over time.

As I mentioned in the previous slide, the Air Force worked with the state agencies in identifying potential sites to be used. As part of this process the Air Force set forth the following requirements for training sites. The sites must be located with one and a half hour drive or one hour flight time from Eglin Hurlburt Field to allow for day trip training missions. The land area must have available roads and infrastructures for access. A training site should require minimal developed improvements. The area must have available aircraft landing areas that require minimal developed improvements.

The only potential sites identified by the state agencies to meet NEPA requirements were Blackwater River and Tate's Hell State Forest. While Tate's Hell State Forest exceeds the one hour — one and a half hour drive time from Eglin and Hurlburt the location is within one hour flight time and as a result it has been carried forward as an alternative and, however, due to the driving distance Tate's Hell State Forest would be used infrequently for ground training. No other alternatives for training sites were identified that met the requirements and as a result, no other

alternatives were considered.

The Air Force proposes to utilize Blackwater
River and Tate's Hell State Forest via a lease and
through agreements with the Florida Forest Service.

For the purposes of this EIS, these state forests have been divided into tactical areas which correlate to each state forest recreational area as shown on the two maps that follow. Training activities may occur at any of the tactical areas with consideration of the restrictions identified here in coordination with the Florida Forest Service during the planning process as well as any constraints or mitigations identified in this EIS.

This map shows the tactical areas identified with the Blackwater River State Forest, all the various shades of green. Personnel would travel to Blackwater State Forest either by road or aircraft or as part of a training exercise. These maps are also provided in your handouts.

Within these sites there could be a clearing cut area where these helicopters could take place -- helicopter activity could take place or ground components would move within one of those areas, but it wouldn't lock down an entire tactical training area for the purpose of that, so it's single

activity.

This map shows the tactical areas identified for Tate's Hell State Forest. Because of the distance from Eglin Air Force Base, approximately 150 to 200 miles depending on the route you take, the road travel to Tate's Hell State Forest would be infrequent. Most training activities would be associated with air transport of personnel and equipment to Tate's Hell State Forest tactical areas.

I would now like to turn the presentation back over to Mr. Mike Spaits.

MIKE SPAITS: Thanks Tom.

Okay, so the goal of the analysis in this EIS is to assess the potential impacts to the human and natural environment associated with the proposed action and identify operational constraints to minimize or avoid potentially adverse impacts to the extent practical. Decision makers will then consider this information in order to make informed decisions. For each alternative considered in this proposal, the proposed action, the no-action alternative, and any alternatives identified during the scoping process the draft EIS will discuss the potential impacts on the — in the — on

environmental resources identified on this slide.

Next in front of you is the current schedule for this EIS. As discussed, the Air Force published a notice of intent to prepare an EIS in the Federal Register on August 12 and is currently in the scoping process with public scoping meetings being held this week. After the public scoping meetings and public commenting period ends, the Air Force will prepare the Draft EIS by considering public comments received during the scoping period, refining the proposed actions and alternatives, gathering information about the effect on the environment and analyzing the potential impacts to the resource areas on the previous slide.

The Draft EIS is anticipated being published late this year or in early 2014 with a 45-day public comment review -- excuse me, with a 45-day public review and comment period to follow its release. During this 45-day review period public hearings will be held for the public to review the Draft EIS and provide comments. After those 45 days are over, the Air Force will respond to comments, modify the Draft EIS and publish the final document in the spring of 2014. Once that's done, no sooner than 30 days after the Final EIS is released to the public,

the Air Force expects to sign a Record of Decision.

The Record of Decision will state whether the proposed action will be implemented and which alternative has been selected.

So this concludes the Air Force presentation, and we'll soon begin the public comment portion of the evening. We will hear your comments and concerns. If you'd like to speak and did not already sign up, please do so during the break. In the foyer when you came in, there's comment cards that we ask you to sign up with. We have a specific order in which we ask folks who have signed up to come speak. First we'll take elected officials, then agency or organizational representatives, after that then private citizens in the order that they sign up.

So you can also visit the GRASI Landscape
Initiative EIS website to gain more information and
better prepare your comments. You can then write
the comments, mail them, or e-mail them as well.
All comments verbal and written will become part of
the official record. For written comments, we have
comment sheets available here today, but again, you
can also go home and if you decide you want to put
it on e-mail or if you want to put it in a letter

1 and mail it, that's fine. We'll accept public 2 comments at any time during the EIS process, 3 however, to make sure that we have enough time to 4 get them into the actual draft document that we publish and print, we need to have your comments by 5 6 September 12, 2013. Any comments that come after 7 that will still be considered by the decision -8 maker. 9 To receive a copy of the Draft EIS please 10 indicate your preference on the comment sheet or 11 just notify us by male, e-mail, or a phone call. All the Draft EIS copies will be distributed as a 12 CD or a DVD, and you can also download it on the 13 14 web at the GRASI EIS website. So we want to take about a five-minute break. 15 16 We're going to ask the subject-matter experts to go 17 back to the boards and allow you about five minutes 18 to ask any questions, talk over there, and we'll 19 reconvene. If there's people that want to give 20 comments, we'll take comments at that period. So 21 about five to ten minutes please. 22 (Intermission) 23 MIKE SPAITS: Okay, ladies and gentlemen, if I 24 could have your attention please. There's no reason

GULF BAY REPORTING

to sit back down. I just wanted to kind of get your

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          attention. We don't have anybody signed up to speak
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          tonight so as a result of that, I just want to
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          emphasize to you that this is not the end of your
          opportunity to participate in the environmental
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          review process. The preparation of an EIS is an
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          ongoing process and as such, you can provide
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          comments at any time throughout the EIS preparation.
          If you have not had an opportunity to do so, we
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          encourage you to ask questions now. I want to thank
          you on behalf of the environmental planning team for
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          your attendance, and we appreciate your time and
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          interest in this initiative proposed action. With
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          that, thank you. Good night.
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          (Conclusion of scoping meeting at 7:00 p.m.)
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GULF BAY REPORTING

STATE OF FLORIDA COUNTY OF BAY

REPORTER'S CERTIFICATE

I HEREBY CERTIFY that the foregoing is a true and accurate transcript of the public scoping meeting for Eglin Air Force Base held August 28, 2013, at the Blountstown Civic Center, Blountstown, Florida.

I FURTHER CERTIFY that I was authorized to and did report the foregoing proceeding and that the transcript is a true and complete record of my stenographic notes.

DATED this the 2nd day of September 2013.

Gertrude B. Downs

29 AUGUST 2013

SCOPING MEETING
GULF REGIONAL AIRSPACE STRATEGIC INITIATIVE
EIS STATEMENT
APALACHICOLA COMMUNITY CENTER
APALACHICOLA, FLORIDA

AUGUST 29, 2013

Transcript of public scoping meeting held August 29, 2013, beginning at 6:00 p.m to 8:00 p.m. in Apalachicola, Florida. Reported by Gertrude B. Downs, FPR.

APPEARANCES:

Mike Spaits Environmental Public Affairs Officer 96th Air Base Wing Eglin Air Force Base, Florida

Tom Tolbert 96th Test Wing Range Planning Office and Air Space Sustainment Office Eglin Air Force Base, Florida

Col. Shawn Moore Commander 96th Civil Engineer Group Eglin Air Force Base, Florida

Mike Penland US Pentagon Department of the Air Force Washington, DC

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Mike	Spaits				a.	 					3	
Col.	Shawn N	Moore				 		٠.			3	
	Penland										6	
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MIKE SPAITS: Ladies and gentlemen, I want to welcome you. First I want to introduce the commander of the 96th Civil Engineer Group, Col. Shawn Moore.

COL. SHAWN MOORE: Good evening everyone, can you hear me okay? Okay, great. I'll make sure I'm loud and I'm very clear for you.

First, what a tremendous turnout today, thank you. Obviously you saw the notice in the paper. We want to hear what you have to say. We are open to your concerns, questions, comments, any and all. That's what this forum is about.

So as Mr. Spaits mentioned, I am Col. Shawn
Moore, and I am the Commander of the 96th Civil
Engineer Group at Eglin Air Force Base just down the
road from y'all, that means underneath my control,
if you will, or my responsibility, and I take this
very seriously, is environmental. Environment is
very key to the success of our mission on our base,
and in our case the mission succeeds with the
environmental. We do not do anything at the expense
of the environment. So hence we understand there
are some environmental questions, concerns, items
you might want to have addressed today, but
Brigadier Gen. David Harris, the 96th Test Wing

Commander, on his behalf, he sent me out here to make sure that we're here to address and to do this.

This is a formal process that we're following the law. The National Environmental Policy Act, is this forum. This requires us to go out and speak to the community. We're not doing it just because we have to. We want to. We want to know what concerns you have, but really up front this process here is to explain to you really what this is all about. That paragraph doesn't do justice to what we're really — really asking to do, what we're going to do. We've worked with several agencies already. Forestry service, the Governor's office is very interested to see how this progresses forward and wants us to really go out there and get these comments. So please ask those question, and listen to what we have to say today about this.

What it boils down to in a nutshell, and we also have Mr. Penland here. He is the -- from the air staff. He's the operational side, the proponent for this study, this initiative so the environment tied with operations truly, we've done our homework before coming to this point. So I wanted to let you know that we have thought this through very closely,

but then again we don't know, we don't know amongst the community so please, bring those other items or questions you have to our attention and make it formally part of the record here and that really helps us to make an informed decision. We want to do what's right.

So with that, Eglin Air Force Base is a national treasure not just because it's a premier Air Force installation and it takes care of helping our national defense strategy in enabling numerous missions, most advanced weapon systems to special operations to a plethora of different types of operations. But our airspace can only contain so much at any one time so we've looked at right now is partnering, looking to other agencies, to what existing infrastructure, existing sites might be out there.

In these particular instances Blackwater River State Forest as well as Hell's Tate -- Tate's Hell State Forest and what's out there, existing helicopter land zones and what have you. And does it make sense? Can we have compatible use of these nonhazardous activities, and Mr. Penland will certainly elaborate on that further. But that -- this is just a stage-setting remark.

We have Mr. Spaits who's from our environmental public affairs for the test wing as well as Mr. Tolbert, he's with our plans and programs for the wing. They're here to spell out to you very clearly in scripted format, if you will, to make sure we haven't missed anything, exactly what this entire initiative entails. We want you leaving with a comfort factor and knowing that we truly have addressed your concerns and questions. And certainly as this proceeding wraps up here, please engage with our subject and our experts that are here to address your questions. And any questions you would like to have, comments to leave, please leave them. We would like to certainly hear what you have to say. So without any further ado, thank you again for coming. I do ask your full attention and listen to everything we have to say, and I'll pass this on to Mr. Penland. MIKE PENLAND: Thank you, sir. I appreciate it. Thanks, and like you said, my name is Mike Penland. I work at headquarters Air Force in the operations directorate up there.

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First of all, I want to say thanks to everybody

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for coming. This is awesome. This is kind of what we would like to see because we really, truly do want your inputs. I'm not much of a scripted guy so we're going to have a scripted thing here in a minute, but I just want to take a few minutes here to ask you — outline what exactly what this is so that you guys know where we're coming from.

I've been the government lead for this really since about 2006 when we first came up with the idea for the Gulf Range -- Gulf -- Eglin Gulf Regional Strategic Initiative. This landscape initiative we're going to talk about tonight is actually an outgrowth of that, so if I could go quick, I'm just going to tell you the Gulf Regional Airspace Strategic Initiative was really an idea we came up with in 2006, because in 2005, if you remember, BRAC 2005 brought in F-35s to Eglin. It brought in the Seven Special Forces Group. It brought in combat systems officer training into Pensacola, lots of different things. Since thence there's been a lot of growth in the Air Force Special Operations Command. There's been, as you all are well aware, a more at 22 growth year over in, at Tyndall, so I would go one step further. I would say that northwest Florida is really, we consider in the

Pentagon it is a national treasure because there are things you can do here in northwest Florida that you cannot do in other places. So from an economic standpoint for you guys, I mean, this is a great place for the military to be in. We appreciate the support that we get from you guys, because there are things that we can do that we can train our guys to go over the theater to get ready to do what they've got to do. So we really do appreciate that.

So some of the things that came out of the original GRASI study was we found out that the airspace gets crowded so we needed to create some high altitude airspace that is really like from 24,000 feet up to 60,000 feet, so a lot of the Joint Strike Fighter stuff that's going to happen in that altitude structure probably will never — in fact I just told you that you would never know probably. So it's going to — a lot of that stuff's going to happen in the high altitude.

Some of the other things, we've decided we needed to do was because of the way the airspace is structured around here is, and because of a lot of the tourism and all the things that, G-8 pilots around here, we needed to come up with some more efficient traffic procedures to get people in and

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out more efficiently, so there's a lot of those kinds of things that came out of that.

The other thing that came out of it was when we did a bunch of computer modeling with guys from Virginia Tech and we had Florida State helping us do some stuff and Virginia Tech -- Virginia Tech, Georgia Tech and Florida State helping us do some stuff, when we figured out what everybody needs to do in northwest Florida, not only military but we also went to all the county airports. We went to the regional airports, and we found out what all they needed to do. When we did all of that stuff, when we put that stuff into a computer model what we found was there was this big hornets nest, if you will, right in the middle of the Eglin range. And what we found when we peeled back that onion was there was a lot of stuff that was happening on the Eglin range that was nonhazardous in nature. And when I say nonhazardous, what I'm talking about is -- is guys, you know, special operators in teams of 12 to 15 guys who are maneuvering around trees and doing stuff. And there's an airplane who's, you know, a twin engine civilian airplane, and you probably wouldn't be able to tell the difference whether or not it's military or a civilian, you know

they're doing stuff, going through objectives and their stuff in the Eglin range. They're kind of going around in circles because they don't have a lot of space, so what we found was there was a lot of that kind of activity that was happening. And unfortunately when the F-22s and F-35s and the test guys and all those guys actually needed to do hazardous stuff, and what I mean by hazardous stuff, I'm talking about bombing, lasing, testing, flying unmanned vehicles, those kinds of things, there was not room for all of that to happen. So we theorized, and we said what if we could find some relief valves so the places out there where these nonhazardous-type activities could occur. So we went and approached the forest service and the State of Florida, and Nature Conservancy, and a whole bunch of folks. And my first sentence when I walked in was please don't throw me out just yet. Let me say what I want to say and then you can throw me out. But what we found was, was, you know, a lot of folks on the conservancy side, the Nature Conservancy, and a lot of folks who were concerned about the environment, they want to limit -- they want to limit construction. They want to limit residential, those kinds of things, so they can

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preserve the environment. Well guess what, that's what we want too. I mean, because we don't want a whole lot of folks around our military bases as well, because then you get noise complaints and then all those different things. So we found that there was a synergy here. There was no — a possibility for a win win, and that's really what kind of started out this whole idea of this landscape initiative.

So what we've done is we have done the first part of the environmental analysis, which is to go in and identify some areas that we think are — that might have a mission need, and they are compatible with the forest service and the other folks that actually own those areas.

We've really got two areas that we're kind of looking at, mission areas I'll call them. One is these highly advanced fighters really need — they're very sensor — sensor sensitive, which means they do a lot of sensor work in the airplanes, like flying a big video game. They need to be able to have sensors out there that they can detect and do certain training activities. And those really need to be — to have a real training advantage they need to be kind of spread out. And right now, we — the

we'll call them emitters, the emitters that we have are kind of focused in on that Eglin range, and they're all plunked together, and they don't really make them a good training environment. So what we theorize is if we could find some areas that we could place mobile emitters, and these are things that are pulled behind a truck or they sit behind a truck, those kinds of things, and place, strategically place those around in a operationally viable configuration, that would create a good training opportunity for our guys. It would allow them to be able to do things that they can't do anywhere else, and it also provides a relief valve because they don't all try to concentrate everything right there in that one piece of airspace, and it kind of spreads it out a little bit. The other thing is this, what I was talking about, providing these relief valves for the guys, mostly special operators, to go out and have areas where they can land CB-22s and helicopters and drop off teams, and let those guys go out and do different things.

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Just as an example, in Blackwater State Forest, we're working with the forest service on, as part of their timber management plan, they go out, and the

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clear cut areas, and those areas sit clear cut for a while before they go out and re-plant them. So we said well, while those areas sit, could we use those as helicopter-landing sites or CB-22 landing sites, so we could have our guys drop of guys and then maneuver and do those kinds of things. And then we found a -- an abandoned school of some kind that sits on the forest service land that could be a really good objective for our guys. So there's all kinds of opportunities we think out there for our guys to get really good with realistic kind of training. So when you hear the -- the scripted version of this, you know, kind of keep some of those things in mind that what we're talking about here are those kinds of activities. I want to stress that I have -- my goal and position with this has always been we want to be compatible. And when I say compatible, we have gone to the forest services and say here's the kind of mission we want to do in this area. Is that compatible with either hunting, or is that compatible with the -- the little creatures that are out there, or the -- the woodpeckers or those kinds

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of things. If it's not, it's off the list.

So the ones we have now we think are

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          compatible. What we need is your input to tell us
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          what we don't know. So we really, truly do want
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          your input to tell us what -- what we haven't found
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          out and what we don't know so we can go back and do
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          the real analysis to actually come up with those,
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          some real alternatives. And if we find out that
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          there's areas that can only be used during certain
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          periods because there's hunting or there's other
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          things going on, we're -- hey, we're up for that,
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          because like I said, we're -- you know, this is new
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          for us, and we want to be good neighbors. We want
          to be good stewards. We really, truly do.
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             So that's why we need your inputs, and I'm
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          going to be available after the scripted version.
          If you guys want to ask questions of me after the
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          comment period and everything, please come up, let
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          me know. Call me Pappy. That's what everybody
          calls me. Nobody calls me Mike, so please call me
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          Pappy, and that's it.
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              NANCY BRUSH: Can I ask a question?
               MIKE PENLAND: I'm not supposed to take
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          questions --
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               NANCY BRUSH: Okay.
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               MIKE PENLAND: -- but go ahead.
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               NANCY BRUSH: Well, first of all, you just
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          scared me by saying you're doing this. I would hope
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          that you came to the table with a little more --
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               MIKE PENLAND: The Air Force is new at this.
             NANCY BRUSH: Okay.
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             MIKE PENLAND: This is something new for us to
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          try. I'm not new at this. I've been in the Air
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          Force for 32 years.
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             NANCY BRUSH: Good, glad to hear that.
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             Eagle nesting, would that be taken into
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          consideration, though, when it's nesting season?
               MIKE PENLAND: All of that stuff's going to be
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          taken into account. So those --
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               NANCY BRUSH: So it's a non-issue?
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               MIKE PENLAND: If there is -- if there is a
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          place that has an eagle-nesting issue, we will
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          avoid -- we will not go to that place. There -- we
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          are going to -- you will see that we --
               NANCY BRUSH: No, but this eagle nesting
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          season, so that season we would probably not want
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          to --
               MIKE PENLAND: Well let's wait and go with the
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          thing, and you can make that comment, and we can
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          talk about it afterwards.
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              NANCY BRUSH: Okay.
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               MIKE PENLAND: Because those are the kind of
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want to have an impact on eagles, or woodpeckers, or you know, salamanders or whatever, those kind of things. So we want to hear what to be -- do that kind of stuff. UNIDENTIFIED AUDIENCE MEMBER: How about tourism? MIKE SPAITS: Okay, folks, now for the boring part. I want to welcome you for attending this public scoping meeting for the Environmental Impact Statement, or EIS, associated with the Gulf Regional Airspace Strategic Landscape Initiative, also known as the GRASI Landscape Initiative. My name is Mike Spaits, Environmental Public Affairs Officer for Eglin Air Force Base, and this public scoping meeting is being held in accordance with the provisions of the National Environmental Policy Act

things we'd want to know. If there is -- we do not

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So what is scoping? Scoping is an early and open process for determining the scope of the issues to be addressed in the study. To ensure we provide an accurate public record, our presentation this evening is scripted. The purpose of this public scoping meeting is to provide you an opportunity to

and the regulations that are published by the

Council on Environmental Quality.

become familiar with the GRASI Landscape Initiative proposed action and give you a chance to make comments regarding the potential alternatives to the proposed action or issues that you recommend we address in the Environmental Impact Statement. This public scoping meeting serves as only one of several opportunities for public comment and involvement as part of the whole EIS process.

The public scoping meeting will be conducted in two parts. First, an Air Force presentation in which we discuss the Environmental Impact Analysis process, provide information on the details of the proposed actions and identify the anticipated timeline for the EIS. Following the Air Force presentation we will take a break and then accept comments and questions from the public. Please make sure that if you wish to make comments at this meeting that you have submitted a comment card indicating so.

If you've not already done so, you can sign up to speak during the break. We will use the submitted cards to call commenters forward and ask you that state your name and any group that you're representing if applicable. I would also like to introduce Mr. Tom Tolbert from the 96th Test Wing

Range Planning Office at Eglin Air Force Base.

So I will provide you an overview of the National Environmental Policy Act, also known as NEPA, and the purpose for the scoping process. Mr. Tolbert will then provide information on the proposed action and alternatives, why they are needed, and how they were established by the Air Force. Afterwards, I'll describe the environmental issues that will be evaluated in the Draft EIS as well as the anticipated schedule for that EIS, and then we'll open the meeting up to public comment.

As I mentioned, I'd like to start off with an introduction to NEPA. NEPA requires federal agencies to consider potential environmental consequences of federal actions in order to make informed decisions. An environmental review is undertaken to determine whether the proposed project may or may not have significant impact on the environment. If there is the potential for the significant impacts then an Environmental Impact Statement, also known as an EIS, is required. The NEPA analysis for this proposal will take the form of an EIS. This EIS will focus on the impacts to the natural, physical and human environment associated with the proposed GRASI Landscape

Initiative. The NEPA process makes sure that the environmental information is available to federal officials and citizens before decisions are made and actions are taken.

NEPA implementing regulations contain detailed requirement — detailed requirement for the preparing of environmental impact statements. For those interested, these are contained in 40 CFR 1500-1508 and 32 CFR Part 989.

In addition to the requirement to evaluate the potential environmental impacts of the proposed action, NEPA requires the Air Force assess the potential environmental impacts of the reasonable alternatives. Tonight's meeting is important because the Air Force must consider reasonable alternatives identified during the scoping process and this is an opportunity for you to communicate options to the Air Force. Alternatives cannot be limited by the Air Force's ability to implement them. On the other hand, the Air Force is not required to consider highly speculative alternatives. Consistent with CEQ regulations the Air Force can limit the alternatives to a range that covers the spectrum of reasonable options.

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Regardless of the alternatives proposed and

reviewed, the Air Force's decision regarding which alternative to select or how to proceed will not be made until public input has been considered and the environmental analysis is completed. The Final Decision will be published in a Record of Decision.

These scoping meetings are part of the NEPA scoping process which is an early and open process the Air Force undertakes to determine the scope of issues to be addressed in the EIS, additional alternatives and for identifying any significant issues related to the proposed action. During the scoping process NEPA requires the Air Force to notify affected federal agencies, state and local agencies, any affected Native American tribes and general public of the Air Force's proposal and its intent to implement the NEPA process.

Scoping ensures the Air Force invites potentially affected agencies or persons to review the proposed action and to provide input regarding potentially significant issues. This scoping process began with a publication of a notice of intent to complete an EIS on this proposal in the Federal Register on August 12, 2013.

Scoping takes place throughout the entire EIS process but in order for public comments to be

considered in the Draft EIS we must receive, or excuse me, comments must be postmarked no later than September 12, 2013.

Your presence here tonight indicates your interest in this proposed action, and I hope your comments will improve our understanding of the issues and impacts related to it so that they can be properly analyzed and addressed in this EIS.

Additionally, your comments will be used to develop the EIS and will become part of the administrative record for this document.

I will now turn it over to Tom Tolbert who will provide information on the proposed action and alternatives, why they're needed, and how they were established by the Air Force.

TOM TOLBERT: Good evening, like Mike said, I'm Tom Tolbert. I'm a range planner with the 96th Test Wing in the Range and Airspace Sustainment Office, and I'd like to thank all of you who have taken the time to attend and participate in this important process.

So what is the Gulf Range Airspace Strategic Initiative, also referred to as the GRASI? Military planners at Eglin Air Force Base realized that the region needed a strategic vision and a coordinated

1 approach to enable the regional airspace to function 2 well. The Department of Defense brought all of the 3 relative stakeholders together for the Gulf Regional Strategic Initiative, also know as the GRASI, a 4 5 collaborative effort between military and civilian 6 leaders to ensure near optimum use of airspace by 7 civilians and the military. The initiative 8 documented the requirements of all airspace uses, 9 established a strategic vision, modeled all the airspace in the region and recorded objectives for 10 11 stakeholders to implement. The resulting GRASI objectives included adding high altitude military 12 airspace, improving air traffic management during 13 14 busy periods, improve management facilities and communication, and for the focus of this EIS, expand 15 16 the military capacity of the region. Additional 17 information regarding this can be found at that website which is also located in your brochures. 18 The GRASI airspace models show that the demand 19 20 of the military restricted areas are the limiting 21 factor on the growth of the military testing and 22 training activity. Military restricted areas are 23 designated airspaces that have -- that restrict 24 civilian access to support military ground or flight

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activities that could be hazardous. Further, many

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of the activities planned or conducted in the restricted areas are tied to nonhazardous ground activity not required to be accomplished on our range and that could be safely conducted outside of the range property under special—use air space.

These nonhazardous activities require only a small ground party or equipment, but without permission to access other areas, the DoD has had to conduct these activities in range and airspace reserved for hazardous activities. To alleviate congestion in restricted areas the Air Force decided to partner with willing and public private owners of large parcels of land over 10,000 acres to investigate —to investigate potential for compatible military use.

So what is the GRASI Landscape Initiative or the GLI? The Air Force began the GRASI Landscape Initiative with two strategies. To partner with non-governmental organizations, states and federal agencies, to acquire new working lands and partner with owners of existing working lands to investigate the potential for military use. The Air Force began by reviewing all activities conducting — conducted in the limiting restricted areas and documenting the numbers and types of operation that are or will be

overpassing the air space. Planners then worked with the relevant stakeholders to identify opportunities for increasing military capacity in the region.

While the overarching goals of the GRASI
Landscape Initiative address increased capacity
throughout the GRASI region for nonhazardous testing
and training activities, such as ground maneuvers
and using helicopter landing zones and hazardous
tests and training activities such as air-to-ground
live fire testing and training, increased capacity
for hazardous activities is in the initial planning
stages and if carried forward would be addressed in
separate NEPA documentation.

The GRASI Landscape Initiative proposed action consists of two main components, establishment and use of up to 12 radar emitter sites throughout northwest Florida and using northwest Florida state forests for nonhazardous training activities. The proposed action is needed because hazardous testing and training activities utilizing the restricted areas over Eglin Air Force Base have been great — have greater scheduling priority than nonhazardous training activities occurring under the restricted areas, and as a result, there are often scheduling

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conflicts for nonhazardous training.

The purpose of the proposed action is to build additional regional capacity for the type of nonhazardous operations that can be conducted outside the restricted areas. This will be accomplished with two types of partnerships. The Air Force requirement of the State of Florida to utilize Blackwater River and Tate's Hell State Forests for nonhazardous testing and training activities as needed. In addition, the Air Force would partner with the Florida Forest Service and Florida Fish and Wildlife Conservation Commission for use of associated land for placement of temporary and mobile training radar emitters. Because complete implementation of these two partnerships may not add sufficient regional capacity, other partnerships in areas are in the initial planning stages but are not ready for a decision and thus not evaluated in this EIS process.

The Air Force anticipates that establishing new nonhazardous training areas and place training emitters in remote locations would improve training outcomes through better scheduling and reducing the competing demands on the restricted areas.

Under the no-action alternative the training

activities identified under the proposed action would continue to occur on Eglin Air Force Base and neither state forests will be utilized, nor would their sites be established. For the purpose of this EIS, the decision to be made is whether to implement the proposed action to establish emitter sites throughout northwest Florida and conduct training activities at Blackwater River and Tate's Hell State Forests and any alt -- any alternatives identified during the scoping process or the no-action alternative, which again would mean continuing all current training activities at Eglin Air Force Base. Now I'll go into the details of the proposed action. A component of proposed action is to establish up to 12 radar telemetry and training emitter sites throughout northwest Florida to support development of a simulated integrated air defense system to be used for training. Radar and telemetry emitters are used for tracking aircraft and navigation and training and radar telemetry, excuse me, training emitters are radar simulators systems designed to help train military personnel to identify and counter enemy missile or artillery threats from land or sea.

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Types of emitters would vary depending on need,

and their use would be determined by constraints associated with each proposed site and respective operational parameters of the specific system. As an example, use of high-powered systems with large safety hazards and distances may be restricted at sites in close proximity to populated areas.

Typical radar and telemetry units would consist of Kineto tracking mount and mobile Cinetheodolite mount systems similar to those on the slide.

The Air Force established basic requirements for the emitter site locations. Per these requirements the radar sites must be within a two and a half to three hour driving distance from Eglin, 0.75 acres in size, accessible via improved roadways, able to accommodate adequate line of sight, example not surrounded by tall trees or utility poles or wires, with minimal improvements required, able to accommodate utility communication and security infrastructure such as power lines, land lines, fiberoptics, again with minimal improvements. They should not be in close proximity to populated areas to minimize safety concerns and disturbance.

The Air Force chose to work with the federal and state agencies to identify sites meeting these

requirements to save time and money. Seventy potential emitter sites were identified, evaluated and narrowed down to the twelve sites assessed in this EIS and identified in the next slide. In the future, additional areas could be considered and would be subject to additional NEPA analysis.

The proposed emitter locations are shown on the following slide. These emitter sites would utilize Florida Forest Service and Florida Fish and Wildlife Conservation Commission lands via leasing agreements. The majority of the sites are associated with the Florida Forest Service watchtower locations at existing sites located or identified in blue on the site which are also identified in your pamphlet as blue. While two sites are owned by the Conservation Commission, which is identified in purple down towards the southwest corner of Tate's Hell for orientation purposes, and the final site is located at Eglin south of Eglin Air Force Base, noted in red.

All sites are either improved or semi-improved and only a few will require additional improvements such as added fencing and/or tree clearing or top clearing. These sites would accommodate mobile and temporary use. Mobile use means that the site could

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be used for day with operators on-site while temporary use may last for several days. Not all proposed sites may be used and only several at any one time would be operational.

Training activities associated with the proposed action consist of utilizing areas previously cleared by the forest service for helicopter landing and drop zones utilizing existing forest roadways for airstrips, conducting a number of different land and air training activities that are described in further detail in your handout and on the poster boards. These activities currently occur on the Eglin Air Force range within the areas of current designated test training sites. The point to make here and highlight is the fact that these are existing cleared areas and would rotate in accordance with the Florida Service Time Management priorities. As they clear an area, we would use it, like Mr. Penland said earlier, until they grew up and was no longer usable. And for the airstrips that are mentioned, it would be existing roads to support small fixed-wing aircraft.

At both Blackwater River and Tate's Hell State
Forests operators must adhere to respective state
forest management plan requirements. In addition,

no live munitions would be used. No substantive land disturbance would be allowed, such as land clearing, construction and digging of pits. There would be no off-the-road vehicle use, and personnel must collect all waste and used expendables. Training activities would avoid impacts to protect its species and habitats such as the red cockaded woodpecker and the Fisher Plant bogs. Finally, the Air Force would coordinate with the Florida Forest Service to schedule activities so that impacts to the public such as campers, hikers, and hunters would be avoided, to notify recreational users of training activities prior to their occurrence. Initially state forest lands will be used for training perhaps only a few times annually. As the GRASI Landscape Initiative program becomes more established, training activities would increase over time.

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As mentioned in the previous slides, the Air Force works with state agencies in identifying potential sites for use. As far as this process, the Air Force set forth the following requirements for the training sites. Sites must be located within a one-and-a-half-hour drive or one-hour flight time from Eglin Hurlburt Field to allow for

day-trip training missions. Land area must have available roads and infrastructure for access. Training sites should require minimal to no improvements, and the area must have available aircraft landing areas that require minimal to no improvements.

The only potential sites identified by the state agencies to meet these requirements were Blackwater River and Tate's Hell State Forest.

While Tate's Hell State Forest exceeds the one-hour, one-and-a-half-hour drive time from Eglin and Hurlburt Field the location is within the one-hour flight time. As a result, it has been carried forward as an alternative. However, due to the driving distance Tate's Hell State Forest would be used infrequently for ground training. No other alternatives for training sites were identified that met the requirements. As a result, no other alternatives were considered.

The Air Force proposes to utilize Blackwater
River and Tate's Hell State Forest via lease and
through agreements with the Florida Forest Service.
For the purposes of this EIS, each state forest has
been divided into tactical areas which correlate to
each state forest recreational area that's shown on

the two maps that follow.

Training activities may occur in any of the tactical areas with consideration of restrictions identified via coordination with the Florida Forest Service during the planning process as well as any constraints or mitigations identified in this EIS.

This map shows a tactical identi -- tactical areas identified for Blackwater River State Forest.

The personnel would travel to Blackwater River State Forest either by road or aircraft as part of a training exercise. This would be all of the various shades of green identified in the slide associated with the Blackwater. These maps are also identified in handouts.

This map shows the tactical areas identified for Tate's Hell State Forest. Because of the distance from Eglin Air Force Base, approximately 150 to 200 miles, depending on the route you take, the road traveled to Tate's Hell State Forest would be infrequent and most training activities would be associated with airport — with air transport of personnel and equipment to Tate's Hell State Forest tactical areas.

I would now like to turn the presentation back over to Mr. Mike Spaits.

MIKE SPAITS: Thanks, Tom.

The goal of the analysis in this EIS is to assess potential impacts to the human and natural environment associated with the proposed action, and identify operational constraints to minimize or avoid potentially adverse impacts to the extent practicable. The decision makers will then consider this information in order to make informed decisions. For each alternative considered in this proposal, the proposed actions, the no-action alternative and any alternatives identified during the scoping process, the Draft EIS will discuss the potential impacts on the environmental resources identified on this slide.

Next is the current schedule for this EIS. As discussed, the Air Force published the notice of intent to preparing the EIS in the Federal Register on August 12, 2013, and is currently in the scoping process with public scoping meetings being held this week. After the public scoping meetings and public commenting period ends, the Air Force will prepare the Draft EIS by considering public comments received during the scoping period, refining the proposed action and the alternatives, gather information about the affected environment and

analyzing the potential impacts to the resource areas on the previous slide.

This Draft EIS is anticipated to be published late this year or in early 2014 with a 45-day public review and commenting period that follows that.

During this time public hearings will be held for the public to review the Draft EIS findings and to provide comments. At the end of the Draft EIS public review period, the Air Force will respond to comments, modify the EIS if needed, and publish the final document in the spring of 2014. No sooner than 30 days after the Final EIS is released to the public, the Air Force expects to be able to sign a Record of Decision. The Record of Decision will state whether the proposed action will be implemented and which alternative has been selected.

So this concludes the Air Force presentation, and we'll soon begin the public comment portion of the evening where we will hear your comments and concerns. If you would like to speak, and you did not already sign up, please do so during this break at the speaker's table in the -- where you registered when you came in. We would like to take in order of the speakers, elected officials will

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completed.

speak first. Anyone representing an agency or an organization will speak second, then private citizens in the order that you signed up. So you may also wish to visit the GRASI Landscape Initiative EIS website at the location identified at the bottom of the screen. It's also, that website is also in your handouts. All comments, both written and verbal, will become part of the official administrative record. For written comments, comment sheets are available at the comment table, and you can write them down and submit them tonight. If you don't want to submit comments tonight, but you want to wait and go back and review the -- you can do that by e-mail or mail, submit your comments. And remember, we welcome public comments in writing at any time throughout the Environmental Impact process, however, in order to be considered in the draft document, we have to receive them by, or excuse me, comments must be

But again, you can also go to your local

dated by September 12, 2013. So when you signed up,

there was also a check box if you wanted to receive

a copy of the EIS by a CD. So Draft EIS's will be

distributed by CD or DVD once the analysis is

website, or go to the local libraries and access the website. So now we'd like to take about a 10-minute break before we begin the public comment portion where we receive your comments and concerns on the issues that we discussed tonight, and please know that we are accepting your comments so that we can go back and analyze them. We don't have all the answers for you tonight, but we sure want to hear what your concerns are so that we can go back and provide you the best analysis possible. So about a 10-minute break. We'll reconvene at about a quarter after. Thank you. UNIDENTIFIED AUDIENCE MEMBER: We thought you were going to have a question-and-answer session before they publish it. MIKE SPAITS: If you go out to the subject-matter experts that are standing by the boards, if you have a question about the proposed action, not about impacts, then they can answer any questions about the proposed action. As far as questions about impacts, that's what you give to us during the comment period, because we don't have all the answers in front of us. We have to do the

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analysis.

(Intermission)

MIKE SPAITS: Can I please have your attention please? All right, ladies and gentlemen, let's start again so if everyone can please take your seats so we can go ahead and start the public commenting period. Hey everybody, can we get everybody to take your seats please. We want to resume the meeting please.

Okay, we've now reached the second part of this public scoping meeting which is your opportunity to provide the Air Force with comments and to make statements for the record. A court reporter is recording everything stated during the public scoping meeting.

Again, the purpose of the comment portion of the scoping meeting is to collect relevant information or questions regarding issues that should be addressed in our analysis. To that end we are here to accept your comments, but we are not going to engage in debate or discussion of the merits of the proposal we are analyzing, nor is this public scoping meeting designed as a question—and—answer session. Nevertheless, you may identify issues, additional alternatives or raise questions that need to be investigated or researched for the EIS. So you can officially comment in

several ways. Sign up and, in one of our comment sheets and speak now and have it recorded by the court reporter, or provide comments in writing by submitting them during the public scoping meeting or here to any of the Air Force officials that are in attendance.

Elected officials that choose to comment will be given an opportunity to speak first, followed by agency and organizational representatives second. The members of the public will then be called upon in the order in which they signed up to speak. I will announce your name and please come up to the microphone and state your name and spell your name for the court reporter please, and which agency or group you are representing so that we can record it correctly.

Please do not provide any personal information in your comments that you would not want to see published in the EIS. I also ask that you not repeat what another speaker has said. If you agree with a previous speaker on a singular issue, you may state your agreement. We want to make sure that we allow enough time for all the speakers. We have a number of speakers signed up and please be considerate enough to know that, you know, other

1 folks want to get their comments too. So with that, 2 I would like to call up Commissioner Cheryl Sanders? 3 CHERYL SANDERS: I didn't put myself down as a commissioner. I put myself down as self. 4 5 MIKE SPAITS: Okay. So do you want to not 6 represent as a commissioner or would you like to go 7 into the public --8 CHERYL SANDERS: Looks like they chose me to 9 speak first, don't it, but -- I'll speak first. Cheryl Sanders, C-H-E-R-Y-L S-A-N-D-E-R-S. 10 11 . Put that in the record. I live in the middle of Tate's Hell. I live in 13 14 the middle of the -- off to the area that you're doing, that you're proposing this. I am strong 15 16 against this because in the '40s my family -- my 17 husband's family was taken off their land in the '40s for the Camp Gordon Johnston training that they 18 19 had done back during those years. They came back on 20 their property. When they came back to their 21 property, they had nothing left, and they were not 22 given their deeds, their original deeds back, and 23 they never wasn't able to get the original land 24 back.

GULF BAY REPORTING

I am concerned about that, because I know once

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          the military comes in, you can't stop them, and I --
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          that's my opinion, and that's my personal opinion.
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          I'm not speaking as a commissioner. I'm speaking as
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          a land owner. I want the record straight on that.
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          And I am against it, and I would ask for y'all to
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         take the no action and to stay out of Tate's Hell
7
          Forest.
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             We supported that many years ago being sold to
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          the State of Florida for the environmental impact of
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          the area because we were one of the last unknown
          areas of the State of Florida. We didn't do it for
11
          the military. We didn't do it for nobody but for
12
13
          preservation.
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               We have controlled our life here on this coast.
          We have kept our building limits down. We have made
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16
          sure that we have an area that is none like anywhere
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          else, and we don't want it messed up. That's it.
               MIKE SPAITS: Thank you. I would now like to
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          call Mr. David Butler, Carrabelle Economic
19
          Development Council.
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               DAVID BUTLER: I thought you were taking
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          politicians first.
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               MIKE SPAITS: That was the -- the only one we
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          had, sir, as far as I know --
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               DAVID BUTLER: This another one? Well you've
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1 got all kinds of politicians here. 2 (Members of audience speaking among themselves.) 3 DAVID BUTLER: David Butler, I'm the Chairman of the Carrabelle Economic Development Council, and 4 5 I know that we already have activity occurring in 6 the Apalachicola National Forest, in the Tate's Hell 7 State Forest, and as far as I know, it's been 8 compatible with what we have been doing. At least I 9 haven't had feedback. I think the question that 10 folks have here is what are we agreeing to and at 11 what scale, I understand from my military training that if 12 13 you have a, an area to that has multi-use you have 14 an operations manager who's going to have a color-coded spreadsheet on what areas are closed, 15 16 what areas are opened, what you can do and what you 17 can't do. If this goes through with an action to be taken, what assurances I guess do we have that when 18 we need something closed, it's going to be closed, 19 20 whether it's hunting or whatever? If anything is damaged, if you have an aircraft that goes down, 21 22 the site's going to be cleaned up and so forth? I 23 think that's what a lot of people here have concern 24 about. 25 Economically I'd like something to happen to

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          help create jobs, but I know the military coming in
 2
          here, you're coming in here training. You know,
 3
          you're going back. You'll have people here
          prepping and, you know, eating in the restaurants
 4
5
          and so forth, but if you're doing anything that will
          help create jobs here, I'd like to see that. Thank
6
7
          you.
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               MIKE SPAITS: Thank you. Okay, I apologize up
 9
          front, Robin Rickles Vroegip (phonetic)?
               ROBIN VROEGOP: Vroegop.
10
11
               MIKE SPAITS: Vroegop.
               ROBIN VROEGOP: Vroegop.
12
               MIKE SPAITS: Florida Geo Tourism Associates.
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14
               ROBIN VROEGOP: Thank you. I'll just spell the
          first and last name. It's Robin, R-O-B-I-N,
15
16
          Vroegop, V-R-O-E-G-O-P. Okay?
17
               I wanted to talk in general about public
18
          access. I am -- my background is that I am a
19
          Florida Master Naturalist. I'm a Florida certified
20
          green guide and also alumni of the Coastal Plains
21
          Institute. I have had the pleasure of actually
22
          going on Eglin Air Force Base with the Coastal
23
          Plains Institute and Dr. D. Bruce Means, who's an
24
          adjunct professor at Florida State University. I
25
          have also had the experience of going on the Yellow
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River which borders a portion of Eglin with the US
Fish and Wildlife Service to tag and net sturgeon
for their populations with the US Fish and Wildlife
with Mr. Frank Corega (phonetic). So I've
experienced what it's like to be both on a military
base or on board of a military base when there are
maneuvers going on, training maneuvers, and I'm
going to tell you that I know about the noises
generated, and in my case on the Yellow River. And
my husband, Mike Vroegop, was with me.

There was constant boat traffic and helicopter traffic and so on. I would think that that's perfectly appropriate for a military base, but when you are going to expand beyond the borders of a military base, I think there becomes some — some — Pappy talked about competing demands. There's going to be competing demands for Tate's Hell, and I think you've already touched on some of it. Hunting, public recreation, you know, wildlife viewing and so on. Fish and Wildlife's conservation commission has their own plan that they came up with to determine visitor experiences on public lands, and that's my concern is if you want to go as a member of the public on public lands, it seems to me that the timing of these type of operations is going to be

key. Because if it competes with hunting season, that's going to be frankly unfair for something that was purchased with public funds. If it's going to — we already can't go when there's fire because that's obviously a necessary routine, so this would be another block of time when public access will not be allowed to portions of this — of this publicly owned space. So I think we need to be very, very cautious about blurring the boundaries of definition between what is military base and what is public access lands for recreation. And so I just want to talk to that.

I also had some questions. I know you said you won't answer questions, but I would like more specifics. You made reference to the certain non-governmental organizations that supported this. I think the Nature Conservancy was mentioned in particular. I would like more information like that about that if it's not in this brochure, because I would like to write them and register my concerns as well.

And then one final thing regarding the -- I'm sure other people will speak more eloquently about the potential for negative impacts for wildlife.

But I just want to point out that in the land

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          management for Tate's Hell State Forest, and I'm
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          quoting from it now, it was to encourage and enhance
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          multiple use in a manner that is agreeable with
          other longterm goals, especially protection of
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          native eco -- native eco systems. I just have not
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          been convinced with -- I have a lot of unanswered
7
          questions, but I have not been convinced with what
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          was presented tonight that there will not be impacts
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          with you proposing airstrips and so on and so forth.
          So I'm withholding opposition at this point because
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          I don't know fully, you know, there's a lot of
          questions that need to be answered, and I would ask
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          you, will -- will us going to that website, will we
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14
          be able to submit questions?
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               MIKE SPAITS: Absolutely.
16
               ROBIN VROEGOP: Will they be answered?
17
               MIKE SPAITS: Absolutely. You can -- actually
18
          my e-mail address there is where you can submit all
19
          your comments and questions to.
20
              ROBIN VROEGOP: And somebody --
21
               MIKE SPAITS: And it's on all the handouts as
22
          well.
23
               ROBIN VROEGOP: Well, I want to comment, but I
24
          want to make sure that --
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               MIKE SPAITS: Yeah.
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               ROBIN VROEGOP: -- my comments are based on,
 2
          you know, factual --
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               MIKE SPAITS: Sure.
             ROBIN VROEGOP: -- the hard picture.
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             MIKE SPAITS: And that website's going to give
6
          you the most, the latest and greatest most
 7
          up-to-date information. And if you read that, and
8
          you find something that you want to comment on,
9
          e-mail it to my e-mail address, and I'll e-mail back
          ensuring that you know that I got it, and we'll make
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11
          sure it gets to the right hands.
               ROBIN VROEGOP: Okay. Thank you very much.
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               MIKE SPAITS: Yes, ma'am, thank you. Charles
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14
          Brandon, Franklin County Dog Hunters Association?
               CHARLES BRANNEN: Charles Brannen,
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          C-H-A-R-L-E-S, Brannen, B-R-A-N-N-E-N.
                  which is right at the corner of the
          state forest and Tate's Hell.
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               I represent about 350 people. This room
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          wouldn't hold them all, and we appreciate all the
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          long notices y'all gave everybody. A lot of people
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          didn't hear it until about three hours ago, so y'all
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          need to tighten up a little bit.
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             I got several questions. To start with, the
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1 Buck Siding is our escape route if we have a storm, 2 and y'all come through there and -- with your 3 equipment and everything, we get a storm, we got to 4 have a way out. 5 The forest done a good job on our ditches up 6 there. All of our water from our ditches run out 7 here to this bay, and all these people here work off 8 the bay. If y'all pollute the ditches, the water is 9 coming through the oysters. We done been through storms. We done been through BP. We done survived 10 11 our bears. We training bears now here to eat our garbage and everything. We're protecting turtles 12 that's going overseas and people are eating these 13 14 overseas and getting paid for it. So I oppose anything that y'all have to do with coming on Tate's 15 16 Hell land, and I got 300 people backing me up. 17 Thank you. MIKE SPAITS: Thank you. Miss Aita Grove, 18 Apalachee Bay Chamber of Commerce? 19 20 AITA GROVE: Hi, Aita Grove. I'll stand on my 21 toes. That's A-I-T-A G-R-O-V-E, Executive Director 22 of the Apalachicola Bay Chamber of Commerce. 23 I just wanted to -- we're a little concerned I 24 think about how it will impact this area. Cheryl 25 mentioned it's been preserved. That's one of the

reasons you're here is it's not been impacted like many other places. And I think it's very important because we're just building our tourism, and people come here to get away from everything that -- the noise from planes, from cars, from -- and to have dark skies at night. And also the wildlife comes here I think to get away from the population. We have more bears than we've ever had. Just staring out the window tonight there's just thousands of dragonflies. You've got to wonder if all these emitters are going to change some wildlife patterns. And I mean, I think this area's been protected at an enormous cost to the people who have been born and raised here. They've foregone the short term benefits of development, as Panama City has and other beach communities have, and they've left it like it is so now everybody's attracted to come here, and we're trying to find a sustainable way to survive, and so I think it has to be factored in with that. And also wearing my economic hat, I've got to wonder if it will impact our airport, which is a World War II airport left to us. Thank you to the

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GULF BAY REPORTING

US government. And it's one of our ways of growing

in the future economic development and also through

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tourism. We have a lot of people who fly here, and how that will impact our airport is very important so. Thank you.

MIKE SPAITS: Thank you. Miss Sandra Powell with the Lower Muskogee Creek Nation, Tama, Georgia. I hope I said that right.

SAUNDRA POWELL: My name is Saundra Powell, S-A-U-N-D-R-A P-O-W-E-L-L.

First thing, I'd like you to know I am a master naturalist. I am of Native American heritage, and 85 percent of our community is of Native American heritage. Each one us have been here, and our families have been here for the last 300 years. We've hunted and fished. This may be a little green dot on the map to that Air Force, but this is our heritage. This is our home. We fish, we hunt, we watch the animals, we watch the birds, we see the butterflies come across the bridge. Each and every one of us have picnicked, camped, drove up and down the roads. We see our friends and our family. We have our family reunions in the forest. We spend so much time. We teach our children to drive in the forest. They start from five years old in the forest. We do everything that we do as pertaining to our national forest out there.

People come from hundreds of thousands of miles it seems like. We -- we meet people out there all the time. We meet them from Germany, Ireland. I met a man in Scottish kilts out there not too long ago that was doing a funeral here, but he was out there in the forest. I've talked to many people hunting -- get out off the road even, which we don't do much because it's really bad out there. So they get out there and hunt arrowheads all kind of things that they've heard that we have here. We know there's been mounds. There's Indians been out there, and 1,500 acres that Forbes took from the Native Americans at -- in the Tate's Hell area up in the Apalachicola National Forest. They took 1,500 acres when we owed them some money. So they took that much land from us. All this land was our land. This -- these are all of our people. All of these people have families that have been here this long. There's very few in here or in our county that are not Native American background. We feel like that's our home. I heard the girl when, she was standing against the wall back there, she said, "This is our land,"

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GULF BAY REPORTING

We do everything out there. We just -- it's just

and that's the way we feel like. This is our home.

1 like part of our neighborhood. Thank you. 2 MIKE SPAITS: Thank you. Bubba Calhoun? 3 BUBBA CALHOUN: I don't need a microphone. 4 That's B-U-B-B-A, not E-R, Calhoun. 5 What she said is the gospel truth. What the others said, particularly the chamber of commerce 6 7 there about the economic, the tourism and all that's 8 here, our new military presence, God bless the 9 military. I took my commission 2 June 1958. I'm a veteran. I'm a red white and blue, United States of 10 11 America patriot big time, but the credibility point here I'd like to refer to, and although I can pose 12 questions, you have told me that you will not answer 13 14 them. That's part of the Delphi system created by the CATO Institute in the 1980's, whether you know 15 16 it or not. The Delphi System is a mind control 17 thing for conducting public meetings by telling people you are the most important part of our entire 18 19 program, and we want you to tell us your heartfelt 20 feelings here. And so you hear it, and you cater to 21 us, and we get buttered up, and then, hey, the 22 decision's already been made. 23 Evidence, sir, would you please tell General 24 Harris that he didn't have the political courtesy 25 among professionals to let Steve Southerland, our

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          Congressman's office, know that this was even going
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          to be occurring today.
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               Now, you don't have to answer me, but I'm
 4
          asking you to be the messenger to tell the good
5
          general that all of this -- and his signature is
6
          on --
7
               MIKE SPAITS: Sir --
             BUBBA CALHOUN: -- this paperwork.
8
9
             MIKE SPAITS: -- if I may just state, General
          Harris personally briefed Congressman Southerland a
10
11
          month ago up in Washington DC on this -- on this
12
          exact action.
               BUBBA CALHOUN: It did not get to his military
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14
          liaison. It did not get to Halsey Beshears, our
          representative in Tallahassee. I talked with him
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16
          personally yesterday morning. He said well, I'm
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          just now picking up on it. So the credibility about
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          the seesaw thing, if we put in balance and measure
          it where we're being dictated to about what we
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          should do, what we'll have to accept because of the
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          criteria, what's been established here, and anything
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          in written form says that this, your publication,
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          has to be in to be creditable by September the 12th.
24
          So that's roughly two weeks from now and that occurs
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          over a major holiday weekend, you know, so to get
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prepped up to build something of a decent response with depth of understanding and factual where you folks, according to your numbers, Pappy been at this seven years, since 2006 was when this first thing had an inspiration, it had its birth, well, there's some great unfairness existing in the atmosphere here. We got -- we got one of the things mentioned here, very individual that says there's a no-action alternative. I vote absolutely that be it.

Now, this says very clearly, your words, you

It has been said this is a God-blessed community. It's part of the forgotten coast, and we take pride in that, I assure you, because of the natural elements that we enjoin every single day.

This says here that a number of different land and air training activities, drop zones and airstrips. I was looking — I was thinking about a drop zone and airstrips, and I looked on page two, and it says no substantive land disturbance for construction. I don't know how you build an airstrip without substantive construction and disturbance of the ecology. The very nature side of this whole thing is precious see, because I'm a move—in. I've been here 20 years, and I'm still an outsider, but I love my life here, and I say it with great feeling now.

Initially training would occur perhaps, well, initially, what does that word mean? That's just a starting point. Bingo, point A, where's point B, point C, point D all the rest of the alphabet?

Uncertain, unknown, unstated. In the same sentence it says training will occur perhaps. Perhaps, well maybe it will and maybe it won't. Maybe there will be this much change and maybe there will be that much change. Nobody knows, but we know very clearly that we are being scoped out psychologically right here in this Delphi system of how you mind control. I know and understand it, sir. I do. You know, y'all got to be quiet now. You can ask questions,

1 but we won't answer them. Okay, got to be nice. 2 So that's the way we feel, sir. It's just --3 it's unavoidable. All the hazardous, nonhazardous stuff, if you've made Eglin hazardous what does that 4 5 really translate into? How long will it take before you make Tate's Hell hazardous? Your terms, your 6 7 criteria, I don't know. Yeah, I know the decisions 8 are already made, and we are being pampered. Good 9 little people, we live down here in this forgotten 10 coast area, so please understand that's my statement 11 to -- because we've been through this before with the St. Joe Corporation that, in the same area. 12 13 Bought with taxpayer -- with tax revenue by the 14 State of Florida to preserve as a nature and wild animal -- lord help me we hear from the FWC. Where 15 16 are they in this proposition? All the things they 17 tell us we can and cannot do with these -- you know, with bears, protect the bears. So they've been 18 coming about a bear maybe the largest bear 19 20 population in the state. So the nature side of it, to be altered in ways that have not been even 21 22 considered in any kind of environmental study of the 23 birds and the bees. But those electric transmitters 24 and all the deer men in this world say, hey, if 25 you've got big power line along with dairies, the

1 count of butterfat content is altered by the 2 electronic effect on the cow herd down there 3 munching on the pasture. So I don't understand that. I don't know about it, but other folks that 4 5 know a lot more than I do about it say that is --6 that exists, how we alter. Yep, you heard about 7 change starting five years ago. Yep, we've had a 8 bunch of change. 9 MIKE SPAITS: Thank you, sir. Ms. Betty 10 Cummins? BETTY CUMMINS: Betty B-E-T-T-Y, Cummins, 11 C-U-M-M-I-N-S. I live on Total , and I 12 come here with probably a much different perspective 13 14 than some of the people that are speaking, and they have all my respect because they have the 15 16 generations behind them that really give them major 17 standing in this place. I come here because I elected to retire here, and I elected -- I chose 18 this place because I couldn't retire in the place 19 20 that I had hoped to. And that place was Vieques, Puerto Rico. 21 22 I was there in 1999 when an errant bomb set off 23 some protests and after that, the terrible, terrible 24 ecological damage became known to the populace and 25 it's the reason why I can't live there because there

have been studies that have shown some of the health issues that the people that live there, continue to live there, are dealing with. And not only that, that was back in 2001, if I'm right, that the protests, with a lot of struggle, managed to make those, the military give up those lands. And I've been told — well, that was the Navy. Well, it's the military and regardless of which branch it is, the damage was devastating.

The people that the -- that had -- that was their birthright had been moved by the military into -- away from the fertile lands that their generations had grown up with a, into basically a reservation that was in the middle of the island away from any of the places -- sometimes with only 48 hours notice. This was back in 1941 that, that happened. But over the course of years while the military was using the range and escalating their use of the range to not just landing and training. It became worse. The evidence is showing pretty serious toxic chemicals and embalming residue on that land.

I have seen that land. I went there during the protests and looked at what happened. There may be some pictures on-line. I would encourage if anybody

in this room could take a look at what happened to Vieques. It still isn't cleaned up. It's still contaminated. Promises have been made.

It went from before the military moved out, and when they were still having their training exercises there is, the whole compound was fenced and the civilians were allowed occasional uses of certain beaches that were the same beaches that were the recreational beaches for the military. But the beaches that had been used for this live fire bombing range and other kinds of experiments by the military, instead of it being able to be clean — the civilians wanted to be able to participate in making sure that contractors came in and did what needed to be done to restore that land. It's been fenced off.

So that is — I heard you to — to somebody this evening — I was going to San Antonio. I'm not native from here, and I grew up with remember the Alamo, but in my heart and mind this is remember Vieques. And I know you're saying you're not proposing anything similar. That you're not proposing any live fire, but after as — as kind of a mollifying strategy before they actually moved the military out, the military said okay, we won't do

1 live fire. We'll just do dummy bombs, and they 2 would drop those on the land, this contaminated land 3 which made craters and threw the -- the terrible 4 toxic particulate matter into the air. The trade 5 winds carried that across the populace. Not surprising that those people are very ill. 6 7 What you said was that initially this would not 8 be -- this would be an, only an occasional thing but 9 it would escalate over time. That it would increase. The frequency would increase over time. 10 11 You said that tonight when you were speaking. You 12 do remember. MIKE SPAITS: I do. I've got the transcript. 13 14 BETTY CUMMINS: And there was -- there's no -there was no indication of at what level the 15 16 escalation could reach. 17 Also, you're talking about leasing the land. Well what does that mean? Is that a 99-year lease 18 with -- with renewal and renewal and renewal so that 19 20 it's forever? And what happens to the money that those, that the lease agreement provides? Where 21 22 does -- what is that? We don't even know how much 23 that is, and who gets it? 24 Cheryl Sanders was right, that the agreement to 25 put this land in the hands of the forest service to

1 preserve it was something that was agreed to because 2 it was thought that, that would be the way to 3 protect it. But it looks to me like the people that 4 we depend on to protect us are the ones that are 5 taking our tax monies and using it against us to 6 destroy what is most treasured here. 7 I intend to comment and -- and this is off the 8 cuff. I did not prepare any statements, but I -- I 9 just am concerned. I know that Taylor County, not 10 too far away, had similar issues with having a 11 proposed bombing range there, and the people of Taylor County did their homework. Found out all 12 13 kinds of things, followed the money trail and found 14 some pretty terrible things associated with who was going to profit from what was being proposed there. 15 16 And they were allowed to have a referendum and be 17 able to vote. As far as I can tell or understand, the people here don't get a vote, and that's wrong. 18 You said you wanted to do what's right. Well, 19 20 what you're proposing is not right. Thank you. MIKE SPAITS: Thank you. Mrs. Margo Posten? 21 22 MARGO POSTEN: Just very quickly, M-A-R-G-O P-O-S T-E-N. 23 24 One of the things I'd like for to be considered 25 in the EIS is to look at the hydrological function

1 of the wetlands. I know that it stated in the, in 2 your brochure in the information that I've read that 3 you've talked about access will be for improved, the existing improved roads that are there. I'm not 4 5 sure if that means that there will be no 6 improvements in these roads so that the equipment 7 could get across, but if there is improvement, I'd like the EIS to reflect or to consider the 8 9 hydrological function that's in the forest because it's very important to the wetlands. I know that 10 wetlands impact wetlands and the floodplains is 11 going to be looked at. But I just wanted to say the 12 hydrological function, the logging roads that are in 13 14 there apparently impact that, and as I said, it's really important for the training in -- within the 15 16 forest. Thank you. 17 MIKE SPAITS: Thank you. Mr. Dan Tonsmeire? DAN TONSMEIRE: Dan, D-A-N, Tonsmeire, 18 T-O-N-S-M-E-I-R-E with the Apalachicola River 19 20 Keeper. Our address is I have not read the details on the website so I 22 23 can't comment specifically so much, and I don't want 24 to repeat what others have said about the reason 25 the land in Tate's Hell State Forest was purchased

and what our expectations are for protecting, preserving the wildlife habitat. The water quality, the wetlands, those are all critical pieces of protecting the river and the bay.

Our past experiences with the military, as you have heard already, have varied levels of concern. You can stand on the beach sometimes at night and hear the occasional F-16 going over at about four or five hundred feet at what seems like four or five hundred miles an hour. We actually had one buried right behind St. George Island here. So the -- even back as far as World War II, there's still live ordnance that occasionally gets found north of Lanark Village or on the beaches it gets uncovered by erosion. And you mentioned that you were going to do a good job of cleaning up, so I think what -- what we need to try to address concerns are for your EIS to be very specific.

And again, the concerns expressed about the potential for increasing use, so some of the things I would like to see are real detail in how many training trips, how many deployments, how many -- you know, what are the access points. What are you going to actually really be doing and put thresholds on them, caps, maximums that you intend to use.

And finally, how can we expect to have our reports of infractions or -- you know, I know people make some mistakes just like the Colonel did flying that jet, so, you know, how do we get if our windows are cracked when the jets fly over or, you know, a hunter's interrupted or how -- how do you -- how clearly are those complaints dealt with?

Conflicts with our tourism industry, local air traffic, how specifically are y'all going to prevent those kind of things from happening? Again, oftentimes EIS's are sort of, you know, we're not going to have any impact. We need details of how you intend to avoid those conflicts and more important, not just avoid them but not have them happen.

So I know I — I have a son that was a member of the 7th Group, and I understand that y'all can be invisible, and you can do things without impacts and people don't even know you're there and know that you've been there, so I — I think that — I understand that you can have a very big impact on local employment as well with jobs. That you need folks, just like our local population here, who are familiar with the terrain and know how to get around in the woods and know how to play the adversary.

And I know that y'all used those people in North Carolina and all over, and so that you can have a large employment impact. Be specific about what you're going to do in that regard so we can measure what benefits we're going to get other than the occasional helicopter with the special forces team dropping off in the middle of the woods at night.

So those are my requests. And again, I say all that without that it -- oftentimes these things are likes trains, and, you know, you're down the road and the schedule that you've layed out's extremely quick and in the next three to four months we're going to have an EIS and in another month it will be out. The review will be done so it's moving really fast and -- and I hope that you truly are going to listen to the concerns and be responsive. Thank you.

MIKE SPAITS: Thank you. Mr. Guy Hogan?

GUY HOGAN: My name's Guy, G-U-Y, Hogan,

H-O-G-A-N.

My concern is that over there in Tate's Hell we have several stands of these, of these dwarf cypress trees and they're out there in the water, and these folks have always been back in there know this part of the country. Well, my concern is that I know

these helicopters, they're going to be flying low and the exhaust that is emitted from that, from those helicopter, I know there's raw fuel and oil that comes out of it. They're going to be flying low, and they're going to be flying over the water, and I'm — my fear is that the fuel that's coming out of those planes over a short period of time will pollute that water, and we fish in that water. We eat the fish out of that water. There's animals that we hunt, drink that water. And then my fear is that in a short period of time it will be, it will be designated — it will just ruin the forest as we know it today. Thank you.

MIKE SPAITS: Thank you.

Okay, if there are no other comments, I would like to reemphasize that this meeting is not the end of your opportunity to participate in the environmental review process. The preparation of an EIS is an ongoing process and as such, you can provide comments anytime throughout its development if you have not had an opportunity to do so, I encourage that you look at the display boards that we have and speak to the subject-matter experts that are manning them. Please know that we don't have all the answers. This is the beginning of the

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1
          process, so we can take your questions and just
 2
          analyze them and get answers and go to work on it.
 3
               UNIDENTIFIED AUDIENCE MEMBER: When?
               MIKE SPAITS: And I want -- during the schedule
 4
5
          that I gave you --
6
               UNIDENTIFIED AUDIENCE MEMBER: Are we going to
7
          have another meeting here?
               MIKE SPAITS: Yes, sir.
8
 9
               So I wish to thank you on behalf of the
          environmental planning team for coming out tonight.
10
          We appreciate your time and interest in the GRASI
11
12
          proposal, and you're now welcome to meet with our
          representatives, and thank you for coming out.
13
14
          (Meeting concluded at 8:00 p.m.)
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GULF BAY REPORTING

STATE OF FLORIDA COUNTY OF BAY

REPORTER'S CERTIFICATE

I HEREBY CERTIFY that the foregoing is a true and accurate transcript of the public scoping meeting for Eglin Air Force Base held August 29, 2013, at the Apalachicola Community Center, Apalachicola, Florida.

I FURTHER CERTIFY that I was authorized to and did report the foregoing proceeding and that the transcript is a true and complete record of my stenographic notes.

DATED this the 5th day of September 2013.

Gertrude B. Downs, FPR

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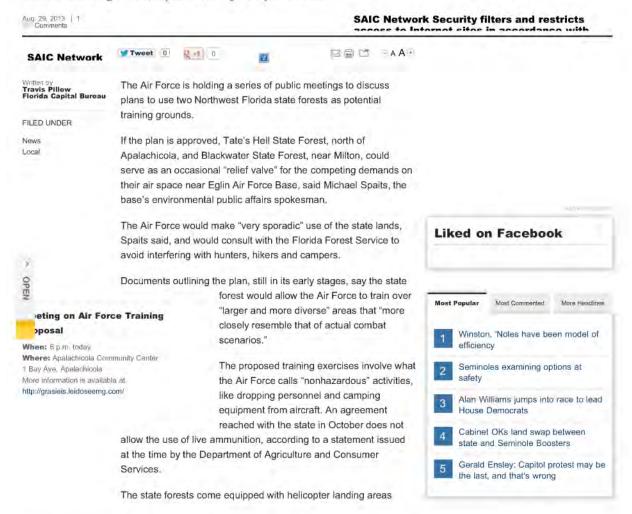
ADDENDUM D SCOPING MEDIA COVERAGE

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Air Force looking to train in Tate's Hell State Forest

Public meeting to take place today in Apalachicola



http://www.tallahassee.com/article/20130829/NEWS01/308280031/Air-Force-looking-train-Tate-s-Hell-State-Forest[9/25/2013 2:52;31 PM]

Air Force looking to train in Tate's Hell State Forest | Tallahassee Democrat | tallahassee.com

used in controlled burns, dirt roads that can serve as landing strips for small aircraft and watch towers that could house radar

The Air Force is required to gather public input on its plan. It has held public meetings in Milton and Blountstown, and has scheduled a third meeting this evening in Apalachicola. It plans to release a draft of its proposed environmental impact statement later this year.













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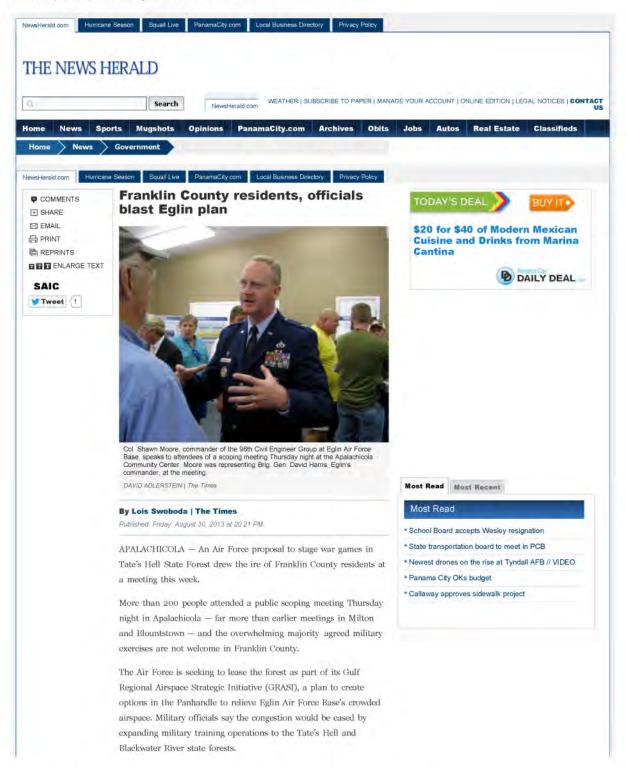
http://www.tallahassee.com/article/20130829/NEWS01/308280031/Air-Force-looking-train-Tate-s-Hell-State-Forest[9/25/2013 2:52:31 PM]

Community Reacts to Eglin Air Force Base Using State Forest Site - WMBB News 13 - The Panhandle's News Leader



http://www.wmbb.com/story/23295899/community-reacts-to-eglin-air-force-base-using-state-forest-sites[9/25/2013 2:16:25 PM]

Franklin County residents, officials blast Eglin plan - Government - The News Herald



 $http://www.newsherald.com/news/government/franklin-county-residents-officials-blast-eglin-plan-1.195711[9/25/2013\ 2:13:23\ PM]$

Franklin County residents, officials blast Eglin plan - Government - The News Herald

Mike Spaits, public affairs officer for Eglin, said the two state forests were identified out of two dozen possibilities as the best fit for training operations, based on distance from Eglin/Hurlburt Pield, minimal need for improvements, available landing areas and other infrastructure for access.

The additional space would be used to conduct non-hazardous training for Special Forces stationed there. Non-hazardous training consists of groups of fewer than 20 individuals dropping from aircraft or conducting covert land maneuvers, without the use of live ammunition.

The Air Force would use existing helipads belonging to the Florida Forestry Service and existing forest roads as runways for fixed wing aircraft. In addition, the Air Force wants to deploy trailer-mounted, temporary and mobile radar, telemetry and training emitters to simulate an integrated air defense system.

Mike "Pappy" Penland, point man for Eglin's Air Armament Center, praised Tate's Hell as a national treasure.

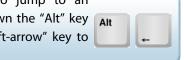


http://www.newsherald.com/news/government/franklin-county-residents-officials-blast-eglin-plan-1.195711[9/25/2013 2:13:23 PM]

APPENDIX C CONSULTATION DOCUMENTATION

C. CONSULTATION DOCUMENTATION

Click on <u>hyperlinks</u> to jump to an element, and hold down the "Alt" key while pressing the "left-arrow" key to GO BACK.



Consultation documentation is currently under development by Eglin AFB, with consultations expected to be initiated late 2013/early 2014 and completed before the Final EIS. This appendix will be updated as documentation is made available.

The following items are included in this appendix.

C.1 CULTURAL RESOURCES CONSULTATION DOCUMENTATION AND CORRESPONDENCE

C.1.1 Cultural Consultation Written Correspondence Timeline

C.1.2Cultural Consultation Phone Call and General Response Correspondence **Timeline**

C.1.3 Cultural Consultation Letters

C.2 COASTAL ZONE CONSISTENCY ACT (CZMA) DETERMINATION **C.3 BIOLOGICAL ASSESSMENT**

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C.1 CULTURAL RESOURCES CONSULTATION DOCUMENTATION AND CORRESPONDENCE

C.1.1 Cultural Consultation Written Correspondence Timeline

Date	То	From	Notes
12/18/2013	Thlopthlocco Tribal Town THPO	Air Force	Invitation to Tribe to review and comment on GRASI project and DOPPA.
12/18/2013	Muscogee (Creek) Nation THPO	Air Force	Invitation to Tribe to review and comment on GRASI project and DOPPA.
12/18/2013	Miccosukee Tribe of Indians of Florida THPO	Air Force	Invitation to Tribe to review and comment on GRASI project and DOPPA.
12/18/2013	Poarch Band of Creek THPO	Air Force	Invitation to Tribe to review and comment on GRASI project and DOPPA.
12/18/2013	Seminole Tribe of Florida THPO	Air Force	Invitation to Tribe to review and comment on GRASI project and DOPPA.
12/18/2013	Seminole Tribe of Florida Compliance Review Section	Air Force	Invitation to Tribe to review and comment on GRASI project and DOPPA.
12/18/2013	Florida SHPO	Air Force	Invitation to SHPO to review and comment on GRASI project and DOPPA.
12/18/2013	ACHP	Air Force	Invitation to ACHP to review and comment on GRASI project and DOPPA.
1/3/2014	Air Force	ACHP	ACHP will not participate in consultation unless requested by SHPO, THPO or another party. MOA will need to be filed with ACHP.
3/26/2014	Miccosukee Tribe of Indians of Florida Chairman; Muscogee (Creek) Naton Principal Chief; Poarch Band of Creek Indians Tribal Chairman; Seminole Tribe of Florida Chairman; Thlopthlocco Tribal Town Town King	Air Force: Brigadier General David A. Harris, Commander, 96 th Test Wing	Government-to-Government consultation on development of a Programmatic Agreement for the GLI.

C.1.2 Cultural Consultation Phone Call and General Response Correspondence Timeline

Call/ Letter/ Email From	Call/ Letter/ Email To	Phone #	Tribe Name	Date of Corres- pondence	Time	Actual Contact/ Response Received	Comments	Concerns Raised	Concurrence
Air Force	Charles Colman	405-220- 2185	Thlopthlocco Tribal Town	1/23/14	1400 & 1417		Busy		
Air Force	Bradley Mueller	863-983- 6549 Ext 12245	Seminole Tribe of Florida	1/23/14	1358 & 1414		busy Not in		
Air Force	Robert Thrower	251-253- 5620	Poarch Band of Creek	1/23/14	1350 & 1417		Busy Not available		
Air Force	Fred Dayhoff	239-695- 4360	Miccosukee Tribe of Indians	1/23/14	1402 & 1415		Busy		
Air Force	Emman Spain	918-894- 8690	Muscogee (Creek) Nation	1/23/14	1345 & 1416		Busy		
Air Force	Charles Colman	405-220- 2185	Thlopthlocco Tribal Town	1/24/14	0908 & 0916	Colman returned call	Not in/left message Emailing him a copy of the package/ indicated he will most likely wait till PA is available for comment		
Air Force	Bradley Mueller	863-983- 6549 Ext 12245	Seminole Tribe of Florida	1/24/14	0902 & 1111		Not in/left message		
Air Force	Robert Thrower	251-253- 5620	Poarch Band of Creek	1/24/14	0910		Not in/ left message.		

Call/ Letter/ Email From	Call/ Letter/ Email To	Phone #	Tribe Name	Date of Corres- pondence	Time	Actual Contact/ Response Received	Comments	Concerns Raised	Concurrence
Air Force	Fred Dayhoff	239-695- 4360	Miccosukee Tribe of Indians	1/24/14	0905	Fred Dayhoff	Not responding, wishes to be notified if human remains are found/missio n must cease immediately		
Air Force	Emman Spain	918-894- 8690	Muscogee (Creek) Nation	1/24/14	0906		Number disconnected		
Air Force	Bradley Mueller	863-983- 6549 Ext 12245	Seminole Tribe of Florida	2/5/14	1002 & 1404		Not in		
Air Force	Robert Thrower	251-253- 5620	Poarch Band of Creek	2/5/14	1004 & 1405		Not in		
Air Force	Emman Spain	918-894- 8690	Muscogee	2/5/14	1005 & 1405		Number disconnected		
Air Force	Bradley Mueller	863-983- 6549 Ext 12245	Seminole Tribe of Florida	2/7/14	0920	Bradley Mueller	Is double checking with compliance. "If Eglin does not receive a response the tribe has no comments".		
Air Force	Robert Thrower	251-253- 5620	Poarch Band of Creek	2/7/14	0925		Not in		
Air Force	Emman Spain	918-894- 8690	Muscogee (Creek) Nation	2/7/14	0927		Number disconnected		

C.1.3 Cultural Consultation Letters



DEPARTMENT OF THE AIR FORCEHEADQUARTERS 96TH TEST WING (AFMC) EGLIN AIR FORCE BASE FLORIDA

Maria D. Rodriguez Chief, Environmental Management Branch 96 CEG/CEIE 501 DeLeon Street, Suite 101 Eglin AFB FL 32542-5105 1 8 DEC 2013

Mr. Emman Spain
Tribal Historic Preservation Officer
Muscogee (Creek) Nation
P.O. Box 580
Okmulgee OK 74447

RE: Gulf Regional Airspace Strategic Initiative (GRASI) Description of Proposed Action and Alternatives (DOPAA)

Dear Mr. Spain

Eglin AFB wishes to comprehensively meet its management responsibilities in a manner that balances its regulatory obligations with its need for operational flexibility. Recently the Deputy Assistant Secretary of the Air Force for Installations entered a Memorandum of Agreement (MOA) with the Florida Department of Agriculture and Consumer Services, Florida Forest Service in order to conduct military training in Blackwater River State Forest and Tate's Hell State Forest. This MOA led to the development of the attached DOPAA. The Area of Potential Effect (APE) is defined as the entire area of the two State Forests. Potential for adverse effect due to ground disturbing training activities is being assessed in the forthcoming EIS.

Eglin would like to invite you to participate in the review of this project. Eglin requests that you review the DOPAA and provide any comments that you may have within 30 days of receiving this letter. Should we not receive a response from your office within the 30-day comment period, Eglin will assume that you have no objections to the implementation of this proposed action identified in the DOPAA.

Sincerely

MARIA D. RODRIGUEZ, GS-14 Chief, Environmental Management Branch

Enclosed: 1 CD with 5 Attachments



Maria D. Rodriguez Chief, Environmental Management Branch 96 CEG/CEIE 501 DeLeon Street, Suite 101 Eglin AFB FL 32542-5105 1 8 DEC 2013

Reid Nelson, Director Office of Federal Agency Programs Old Post Office Building 1100 Pennsylvania Avenue, NW, Suite 803 Washington DC 20004

RE: Gulf Regional Airspace Strategic Initiative (GRASI) Description of Proposed Action and Alternatives (DOPAA)

Dear Mr. Nelson

Eglin AFB wishes to comprehensively meet its management responsibilities in a manner that balances its regulatory obligations with its need for operational flexibility. Recently the Deputy Assistant Secretary of the Air Force for Installations entered a Memorandum of Agreement (MOA) with the Florida Department of Agriculture and Consumer Services, Florida Forest Service in order to conduct military training in Blackwater River State Forest and Tate's Hell State Forest. This MOA led to the development of the attached DOPAA. The Area of Potential Effect (APE) is defined as the entire area of the two State Forests. Potential for adverse effect due to ground disturbing training activities is being assessed in the forthcoming EIS.

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Sincerely

MARIA D. RODRÍGUEZ, GS-14

Chief, Environmental Management Branch

Enclosed:

1 CD with 5 Attachments



1 8 DEC 2013

Maria D. Rodriguez Chief, Environmental Management Branch 96 CEG/CEIE 501 DeLeon Street, Suite 101 Eglin AFB FL 32542-5105

Mr. Fred Dayhoff NAGPRA/Section 106 Representative Miccosukee Tribe of Indians of Florida P.O. Box 440021 Miami FL 33144

RE: Gulf Regional Airspace Strategic Initiative (GRASI) Description of Proposed Action and Alternatives (DOPAA)

Dear Mr. Dayhoff

Eglin AFB wishes to comprehensively meet its management responsibilities in a manner that balances its regulatory obligations with its need for operational flexibility. Recently the Deputy Assistant Secretary of the Air Force for Installations entered a Memorandum of Agreement (MOA) with the Florida Department of Agriculture and Consumer Services, Florida Forest Service in order to conduct military training in Blackwater River State Forest and Tate's Hell State Forest. This MOA led to the development of the attached DOPAA. The Area of Potential Effect (APE) is defined as the entire area of the two State Forests. Potential for adverse effect due to ground disturbing training activities is being assessed in the forthcoming EIS.

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Sincerely

MARIA D. RODRIGUEZ, GS-14 Chief, Environmental Management Branch

Enclosed: 1 CD with 5 Attachments



Maria D. Rodriguez Chief, Environmental Management Branch 96 CEG/CEIE 501 DeLeon Street, Suite 101 Eglin AFB FL 32542-5105

1 8 DEC 2013

Mr. Robert G. Thrower Tribal Historic Preservation Officer Poarch Band of Creek Indians 5811 Jack Springs Road Atmore AL 36502

RE: Gulf Regional Airspace Strategic Initiative (GRASI) Description of Proposed Action and Alternatives (DOPAA)

Dear Mr. Thrower

Eglin AFB wishes to comprehensively meet its management responsibilities in a manner that balances its regulatory obligations with its need for operational flexibility. Recently the Deputy Assistant Secretary of the Air Force for Installations entered a Memorandum of Agreement (MOA) with the Florida Department of Agriculture and Consumer Services, Florida Forest Service in order to conduct military training in Blackwater River State Forest and Tate's Hell State Forest. This MOA led to the development of the attached DOPAA. The Area of Potential Effect (APE) is defined as the entire area of the two State Forests. Potential for adverse effect due to ground disturbing training activities is being assessed in the forthcoming EIS.

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Sincerely

Maria D. RODRIGUEZ, GS-14

Chief, Environmental Management Branch

Enclosed:

1 CD with 5 Attachments



1 8 DEC 2013

Maria D. Rodriguez Chief, Environmental Management Branch 96 CEG/CEIE 501 DeLeon Street, Suite 101 Eglin AFB FL 32542-5105

Paul N. Backhouse, Ph.D. Tribal Historic Preservation Office Seminole Tribe of Florida 30290 Josie Billie Highway, PMB 1004 Clewiston FL 33440

RE: Gulf Regional Airspace Strategic Initiative (GRASI) Description of Proposed Action and Alternatives (DOPAA)

Dear Dr. Backhouse

Eglin AFB wishes to comprehensively meet its management responsibilities in a manner that balances its regulatory obligations with its need for operational flexibility. Recently the Deputy Assistant Secretary of the Air Force for Installations entered a Memorandum of Agreement (MOA) with the Florida Department of Agriculture and Consumer Services, Florida Forest Service in order to conduct military training in Blackwater River State Forest and Tate's Hell State Forest. This MOA led to the development of the attached DOPAA. The Area of Potential Effect (APE) is defined as the entire area of the two State Forests. Potential for adverse effect due to ground disturbing training activities is being assessed in the forthcoming EIS.

Eglin would like to invite you to participate in the review of this project. Eglin requests that you review the DOPAA and provide any comments that you may have within 30 days of receiving this letter. Should we not receive a response from your office within the 30-day comment period, Eglin will assume that you have no objections to the implementation of this proposed action identified in the DOPAA.

Sincerely

MARIA D. RODRIGUEZ, GS-14 Chief, Environmental Management Branch

Enclosed:

1 CD with 5 Attachments



Maria D. Rodriguez
Chief, Environmental Management Branch
96 CEG/CEIE
501 DeLeon Street, Suite 101
Eglin AFB FL 32542-5105

1 8 DEC 2013

Bradley M. Mueller, M.A., Supervisor Compliance Review Section Seminole Tribe of Florida 30290 Josie Billie Highway, PMB 1004 Clewiston FL 33440

RE: Gulf Regional Airspace Strategic Initiative (GRASI) Description of Proposed Action and Alternatives (DOPAA)

Dear Mr. Mueller

Eglin AFB wishes to comprehensively meet its management responsibilities in a manner that balances its regulatory obligations with its need for operational flexibility. Recently the Deputy Assistant Secretary of the Air Force for Installations entered a Memorandum of Agreement (MOA) with the Florida Department of Agriculture and Consumer Services, Florida Forest Service in order to conduct military training in Blackwater River State Forest and Tate's Hell State Forest. This MOA led to the development of the attached DOPAA. The Area of Potential Effect (APE) is defined as the entire area of the two State Forests. Potential for adverse effect due to ground disturbing training activities is being assessed in the forthcoming EIS.

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Chief, Environmental Management Branch

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1 8 DEC 2013

Maria D. Rodriguez Chief, Environmental Management Branch 96 CEG/CEIE 501 DeLeon Street, Suite 101 Eglin AFB FL 32542-5105

Robert F. Bendus, Director Division of Historical Resources R.A. Gray Building 500 South Bronough Street Tallahassee FL 32399-0250

RE: Gulf Regional Airspace Strategic Initiative (GRASI) Description of Proposed Action and Alternatives (DOPAA)

Dear Mr. Bendus

Eglin AFB wishes to comprehensively meet its management responsibilities in a manner that balances its regulatory obligations with its need for operational flexibility. Recently the Deputy Assistant Secretary of the Air Force for Installations entered a Memorandum of Agreement (MOA) with the Florida Department of Agriculture and Consumer Services, Florida Forest Service in order to conduct military training in Blackwater River State Forest and Tate's Hell State Forest. This MOA led to the development of the attached DOPAA. The Area of Potential Effect (APE) is defined as the entire area of the two State Forests. Potential for adverse effect due to ground disturbing training activities is being assessed in the forthcoming EIS.

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Chief, Environmental Management Branch

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1 8 DEC 2013

Maria D. Rodriguez Chief, Environmental Management Branch 96 CEG/CEIE 501 DeLeon Street, Suite 101 Eglin AFB FL 32542-5105

Mr. Charles Coleman Tribal Historic Preservation Officer Thlopthlocco Tribal Town P.O. Box 188 Okemah OK 74859-0188

RE: Gulf Regional Airspace Strategic Initiative (GRASI) Description of Proposed Action and Alternatives (DOPAA)

Dear Mr. Coleman

Eglin AFB wishes to comprehensively meet its management responsibilities in a manner that balances its regulatory obligations with its need for operational flexibility. Recently the Deputy Assistant Secretary of the Air Force for Installations entered a Memorandum of Agreement (MOA) with the Florida Department of Agriculture and Consumer Services, Florida Forest Service in order to conduct military training in Blackwater River State Forest and Tate's Hell State Forest. This MOA led to the development of the attached DOPAA. The Area of Potential Effect (APE) is defined as the entire area of the two State Forests. Potential for adverse effect due to ground disturbing training activities is being assessed in the forthcoming EIS.

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Maria d. Theligy MARIA D. RODRIGUEZ, GS-14

Chief, Environmental Management Branch

Enclosed:

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January 3, 2014

Brigadier General David A. Harris Commander Eglin Air Force Base 96 TW/CC 101 West D Avenue, Suite 132 Eglin Air Force Base, FL 32542-5495

Ref: Proposed Gulf Regional Airspace Strategic Initiative (GRASI) Landscape Initiative between the State of Florida and the 96th Test Wing at Eglin Air Force Base Santa Rosa, Okaloosa, and Franklin Counties, Florida

Dear Brig Gen Harris:

The Advisory Council on Historic Preservation (ACHP) received your notification and supporting documentation regarding the adverse effects of the referenced undertaking on properties listed on and eligible for listing in the National Register of Historic Places. Based upon the information you provided, we have concluded that Appendix A, *Criteria for Council Involvement in Reviewing Individual Section 106 Cases*, of our regulations, "Protection of Historic Properties" (36 CFR Part 800) does not apply to this undertaking. Accordingly, we do not believe that our participation in the consultation to resolve adverse effects is needed. However, if we receive a request for participation from the State Historic Preservation Officer, Tribal Historic Preservation Officer, or another party, we may reconsider this decision. Additionally, should circumstances change, and you determine that our participation is needed to conclude the consultation process, please notify us.

Pursuant to 36 CFR 800.6(b)(1)(iv), you will need to file the final Memorandum of Agreement (MOA), developed in consultation with the Florida State Historic Preservation Officer (SHPO) and any other consulting parties, and related documentation with the ACHP at the conclusion of the consultation process. The filing of the Agreement and supporting documentation with the ACHP is required in order to complete the requirements of Section 106 of the National Historic Preservation Act.

Thank you for providing us with your notification of adverse effect. If you have any questions or require further assistance, please contact Katharine Kerr at 202-606-8534, or via email at kkerr@achp.gov.

Sincerely,

Raymond V. Wallace

Raymord V. Hallace

Historic Preservation Technician Office of Federal Agency Programs

ADVISORY COUNCIL ON HISTORIC PRESERVATION
1100 Pennsylvania Avenue NW, Suite 803 • Washington, DC 20004
Phone: 202-606-8503 • Fax: 202-606-8647 • achp@achp.gov • www.achp.gov



Brigadier General David A. Harris Commander, 96th Test Wing 100 West D Avenue, Suite 118 Eglin AFB FL 32542-5105

Mr. Colley Billie Chairman Miccosukee Tribe of Indians of Florida Tamiami Station PO Box 440021 Miami FL 33144

Re: Resolving Adverse Effects Resulting from the Gulf Regional Airspace Strategic Initiative (GRASI) Military Training Program

Dear Chairman Billie

Eglin Air Force Base (AFB) in Okaloosa County, Florida is initiating government-to-government consultation with your tribe on developing a Programmatic Agreement (PA) for the GRASI military training program, as further described below. A PA is needed to comply with Section 106 of the *National Historic Preservation Act* and its implementing regulations at 36 CFR Part 800. Under 36 CFR § 800.5 Eglin AFB has determined that the GRASI military training program may adversely affect properties listed in or eligible for listing in the *National Register of Historic Places (NRHP)*. Eglin AFB invites the tribe to participate as a concurring party in developing the PA for the GRASI military training program.

As described in our letter to the tribe dated 13 December 2013, GRASI is a training program that will enable Eglin AFB and other Department of Defense facilities in the Florida Gulf region to expand military training opportunities for the future. GRASI is the product of a joint military and civilian planning effort designed to meet growing military air and ground training needs in the Gulf region. Eglin AFB, in cooperation with the State of Florida, proposes to utilize various portions of two existing state forests to conduct nonhazardous military activities: Blackwater River State Forest (BRSF) and Tate's Hell State Forest (THSF) (Atch 1). Both state forests are located in the Florida Panhandle and are easily accessible by air. Twelve locations throughout Northwest Florida are also needed for mobile radar, telemetry, and training emitter sites. These sites will be less than 0.5 acres and have been previously developed. Eleven of the proposed 12 emitter sites are located on land owned by the State of Florida Forest Service or Florida Fish and Wildlife Conservation Commission lands. One site is on Eglin AFB property. Each of the 12 emitter sites has been heavily disturbed by previous development and is unlikely to contain intact cultural resources (Atch 2).

Multiple cultural resources inventories conducted at BRSF and THSF in the past have identified historic and prehistoric archaeological sites that may be eligible for listing in the NRHP. Survey coverage has been limited, however, and additional inventory to record historic buildings/structures, archaeological sites and possible ethnographic resources (traditional cultural properties) will be needed. Ground disturbance resulting from air support and ground maneuvers is expected to have a low impact over the short term; however, over the long run, air support and ground training activities associated with GRASI have the potential to have an adverse cumulative effect to National Register-eligible historic properties. Eglin AFB will prepare the PA in anticipation of the proposed training to avoid, minimize and mitigate any adverse effects that may result, in accordance with the Section 106 requirements.

Eglin AFB requests that the Miccosukee Tribe of Indians of Florida provide any information that you can share on places of traditional and cultural significance within the BRSF and THSF project areas, and that could also be adversely affected by the proposed training mission. Maps of the two state forests are attached along with summary information on known cultural resources for your review (Atch 3). Please inform my office if your tribe wishes to participate in developing the PA and will be joining the PA as a concurring party.

If you have any questions or comments about the GRASI military training program or its potential adverse effects at this point, please contact me.

Sincerely

DAVID A. HARRIS Brigadier General Commander

cc:

Mr. Steve Terry NAGPRA and Section 106 Representative Miccosukee Tribe of Indians of Florida Tamiami Station PO Box 440021 Miami FL 33144

- 3 Attachments:
- 1. Map of State Forest Locations
- 2. Map of Potential Emitter Locations
- 3. CD containing Maps of Known Archaeological Sites in the State Forests



Brigadier General David A. Harris Commander, 96th Test Wing 100 West D Avenue, Suite 118 Eglin AFB FL 32542-5105

Mr. George Tiger Principal Chief Muscogee (Creek) Nation Office of the Administration P.O. Box 580 Okmulgee OK 74447

Re: Resolving Adverse Effects Resulting from the Gulf Regional Airspace Strategic Initiative (GRASI) Military Training Program

Dear Principal Chief Tiger

Eglin Air Force Base (AFB) in Okaloosa County, Florida is initiating government-to-government consultation with your tribe on developing a Programmatic Agreement (PA) for the GRASI military training program, as further described below. A PA is needed to comply with Section 106 of the *National Historic Preservation Act* and its implementing regulations at 36 CFR Part 800. Under 36 CFR § 800.5 Eglin AFB has determined that the GRASI military training program may adversely affect properties listed in or eligible for listing in the *National Register of Historic Places (NRHP)*. Eglin AFB invites the tribe to participate as a concurring party in developing the PA for the GRASI military training program.

As described in our letter to the tribe dated 13 December 2013, GRASI is a training program that will enable Eglin AFB and other Department of Defense facilities in the Florida Gulf region to expand military training opportunities for the future. GRASI is the product of a joint military and civilian planning effort designed to meet growing military air and ground training needs in the Gulf region. Eglin AFB, in cooperation with the State of Florida, proposes to utilize various portions of two existing state forests to conduct nonhazardous military activities: Blackwater River State Forest (BRSF) and Tate's Hell State Forest (THSF) (Atch 1). Both state forests are located in the Florida Panhandle and are easily accessible by air. Twelve locations throughout Northwest Florida are also needed for mobile radar, telemetry, and training emitter sites. These sites will be less than 0.5 acres and have been previously developed. Eleven of the proposed 12 emitter sites are located on land owned by the State of Florida Forest Service or Florida Fish and Wildlife Conservation Commission lands. One site is on Eglin AFB property. Each of the 12 emitter sites has been heavily disturbed by previous development and is unlikely to contain intact cultural resources (Atch 2).

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Eglin AFB requests that the Muscogee (Creek) Nation provide any information that you can share on places of traditional and cultural significance within the BRSF and THSF project areas, and that could also be adversely affected by the proposed training mission. Maps of the two state forests are attached along with summary information on known cultural resources for your review (Atch 3). Please inform my office if your tribe wishes to participate in developing the PA and will be joining the PA as a concurring party.

If you have any questions or comments about the GRASI military training program or its potential adverse effects at this point, please contact me.

Sincerely

DAVID A. HARRIS Brigadier General Commander

cc:

Mr. Emman Spain, THPO Cultural Preservation Office PO Box 580 Ocmulgee OK 74447

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Brigadier General David A. Harris Commander, 96th Test Wing 100 West D Avenue, Suite 118 Eglin AFB FL 32542-5105

Mr. Buford L. Rolin Tribal Chairman Chairman Poarch Band of Creek Indians 5811 Jack Spring Road Atmore AL 36502

Re: Resolving Adverse Effects Resulting from the Gulf Regional Airspace Strategic Initiative (GRASI) Military Training Program

Dear Tribal Chairman Rolin

Eglin Air Force Base (AFB) in Okaloosa County, Florida is initiating government-to-government consultation with your tribe on developing a Programmatic Agreement (PA) for the GRASI military training program, as further described below. A PA is needed to comply with Section 106 of the *National Historic Preservation Act* and its implementing regulations at 36 CFR Part 800. Under 36 CFR § 800.5 Eglin AFB has determined that the GRASI military training program may adversely affect properties listed in or eligible for listing in the *National Register of Historic Places (NRHP)*. Eglin AFB invites the tribe to participate as a concurring party in developing the PA for the GRASI military training program.

As described in our letter to the tribe dated 13 December 2013, GRASI is a training program that will enable Eglin AFB and other Department of Defense facilities in the Florida Gulf region to expand military training opportunities for the future. GRASI is the product of a joint military and civilian planning effort designed to meet growing military air and ground training needs in the Gulf region. Eglin AFB, in cooperation with the State of Florida, proposes to utilize various portions of two existing state forests to conduct nonhazardous military activities: Blackwater River State Forest (BRSF) and Tate's Hell State Forest (THSF) (Atch 1). Both state forests are located in the Florida Panhandle and are easily accessible by air. Twelve locations throughout Northwest Florida are also needed for mobile radar, telemetry, and training emitter sites. These sites will be less than 0.5 acres and have been previously developed. Eleven of the proposed 12 emitter sites are located on land owned by the State of Florida Forest Service or Florida Fish and Wildlife Conservation Commission lands. One site is on Eglin AFB property. Each of the 12 emitter sites has been heavily disturbed by previous development and is unlikely to contain intact cultural resources (Atch 2).

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Eglin AFB requests that the Poarch Band of Creek Indians provide any information that you can share on places of traditional and cultural significance within the BRSF and THSF project areas, and that could also be adversely affected by the proposed training mission. Maps of the two state forests are attached along with summary information on known cultural resources for your review (Atch 3). Please inform my office if your tribe wishes to participate in developing the PA and will be joining the PA as a concurring party.

If you have any questions or comments about the GRASI military training program or its potential adverse effects at this point, please contact me.

Sincerely

DAVID A. HARRIS Brigadier General Commander

cc:

Mr. Robert G. Thrower Tribal Historic Preservation Officer Poarch Band of Creek Indians 5811 Jack Springs Road Atmore AL 36502

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Brigadier General David A. Harris Commander, 96th Test Wing 100 West D Avenue, Suite 118 Eglin AFB FL 32542-5105

Mr. James E. Billie Chairman Seminole Tribe of Florida 6300 Stirling Road Hollywood FL 33024

Re: Resolving Adverse Effects Resulting from the Gulf Regional Airspace Strategic Initiative (GRASI) Military Training Program

Dear Chairman Billie

Eglin Air Force Base (AFB) in Okaloosa County, Florida is initiating government-to-government consultation with your tribe on developing a Programmatic Agreement (PA) for the GRASI military training program, as further described below. A PA is needed to comply with Section 106 of the *National Historic Preservation Act* and its implementing regulations at 36 CFR Part 800. Under 36 CFR § 800.5 Eglin AFB has determined that the GRASI military training program may adversely affect properties listed in or eligible for listing in the *National Register of Historic Places (NRHP)*. Eglin AFB invites the tribe to participate as a concurring party in developing the PA for the GRASI military training program.

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Dr. Paul N. Backhouse Tribal Historic Preservation Officer 30290 Josie Billie Hwy, PMB 1004 Clewiston FL 33440

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Brigadier General David A. Harris Commander, 96th Test Wing 100 West D Avenue, Suite 118 Eglin AFB FL 32542-5105

Mr. George Scott Town King Thlopthlocco Tribal Town P.O. Box 188 Okemah OK 74859-0188

Re: Resolving Adverse Effects Resulting from the Gulf Regional Airspace Strategic Initiative (GRASI) Military Training Program

Dear Town King Scott

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C.2 COASTAL ZONE CONSISTENCY ACT (CZMA) DETERMINATION

FEDERAL AGENCY COASTAL ZONE MANAGEMENT ACT (CZMA) CONSISTENCY DETERMINATION

Introduction

This document provides the State of Florida with the U.S. Air Force's Consistency Determination under CZMA Section 307 and 15 C.F.R. Part 930 sub-part C. The information in this Consistency Determination is provided pursuant to 15 C.F.R. Section 930.39 and Section 307 of the Coastal Zone Management Act, 16 U.S.C. § 1456, as amended, and its implementing regulations at 15 C.F.R. Part 930.

This federal consistency determination addresses the Gulf Regional Airspace Strategic Initiative (GRASI) Landscape Initiative (LI) Environmental Impact Statement (EIS) to utilize Blackwater River State Forest (BRSF) and Tate's Hell State Forest (THSF) for nonhazardous operations to include: helicopter landing and drop zones, airstrips, and associated land, water, and air training activities (operations currently occurring on Eglin Air Force Base [AFB]). The Air Force is also proposing to establish radar, telemetry and training emitter sites throughout northwest Florida.

Proposed Federal agency action:

The Proposed Action consists of two main components: establishment and use of training emitter sites and use of northwest Florida state forests for nonhazardous training activities. The purpose of the Air Force's Proposed Action is to afford military operational flexibility by providing optional training space for nonhazardous training should hazardous activity preclude use of the Eglin AFB Range.

The first component of the Proposed Action is for the placement of up to 12 radar, telemetry, and training emitter sites throughout northwest Florida to support development of a simulated integrated air defense system (IADS) to be used for air training (refer to Section 2.3.1 of the EIS). The majority of sites are associated with Florida Forest Service (FFS) watch towers, while two sites are owned by Florida Fish and Wildlife Conservation Commission (FWC) and one site by Eglin AFB. All sites are either "improved" or "semi-improved"; the area for each site would be approximately 0.5 acres. Training emitter sites identified would utilize FFS and FWC lands via leasing agreements. These sites would accommodate mobile and temporary use; mobile use means that the site would be used for a day with operators on-site, while temporary use may last for several days.

Training activities associated with the Proposed Action consist of helicopter landing and drop zones, airstrips, and a number of different land and air training activities; these activities currently occur on the Eglin AFB Range. Existing cleared areas within the state forests would be utilized as landing sites for helicopters and drop zones (DZs) for personnel and equipment from various aircraft (either fixed or rotary wing). Road improvements may be made to establish airstrips; however, these activities would occur in coordination with the FFS and follow FFS requirements. Landing and drop activities would also occur as part of the training activities. Helicopter landing zones (HLZs) are cleared areas that vary in size depending on the number and type of aircraft being used; a single CV-22 (Osprey) would need about an acre, while two CH-47s would need about 2.75 acres. Initially, training would occur perhaps only a few times

annually and as the GRASI Landscape Initiative program becomes more established training activities would increase over time, potentially occurring at frequencies described in the individual activity tables in Sections 2.3.2.1 through 2.3.2.2 of the EIS.

As part of the Proposed Action, Eglin AFB would establish a Landscape Implementation Team (LIT) and a GRASI Landscape Initiative Liaison to coordinate with the FFS in the following capacities:

- Developing real property leases/agreements
- Developing and implementing a methodology for scheduling training activities
- Identifying and implementing funding/reimbursement mechanisms to pay for leases/agreements
- Identifying specific operating requirements (e.g., number and sizes of HLZs/DZs needed for a particular year)
- Addressing each training site as an extension of the Eglin Range in terms of updating and revising training directives and safety requirements
- Developing addendums/attachments to Eglin Air Force Base Instruction (EAFBI) 13-212
 Chapter 7 for BRSF and THSF to identify environmental considerations detailed in the EIS
- Ensuring compliance with EAFBI 13-212 Chapter 7, and appropriate environmental requirements

All mitigations and requirements identified in the EIS and the associated Mitigation Plan would be incorporated into an operating agreement with the FFS. For all training activities, operators must adhere to respective state forest management plan requirements. Such requirements include contacting the respective forest dispatch to identify campground activity for avoidance of inhabited recreational areas. In addition, no substantive land disturbance (e.g., land clearing, construction, digging of pits) would be allowed, and personnel must collect all waste/used expendables. These requirements are further detailed in Chapters 2 and 3 of the EIS. Road improvements may be made to establish airstrips; however, these activities would occur in coordination with the FFS and follow FFS requirements.

Federal Consistency Review

Statutes addressed as part of the Florida Coastal Zone Management Program consistency review and considered in the analysis of the Proposed Action are discussed in the following table.

Pursuant to 15 C.F.R. § 930.41, the Florida State Clearinghouse has 60 days from receipt of this document in which to concur with or object to this Consistency Determination, or to request an extension, in writing, under 15 C.F.R. § 930.41(b). Florida's concurrence will be presumed if Eglin AFB does not receive its response on the 60th day from receipt of this determination.

Florida Coastal Management Program Consistency Review

Statute	Consistency	Scope
Chapter 161 Beach and Shore Preservation	The Proposed Action would not affect beach and shore management, specifically as it pertains to:	This statute provides policy for the regulation of construction, reconstruction, and other physical activities related to the beaches and
	The Coastal Construction Permit Program The Coastal Construction Permit The Coastal Construc	shores of the state. Additionally, this statute requires the restoration and
	The Coastal Construction Control Line (CCCL) Permit Program	maintenance of critically croding beaches.
	Amphibious operations would occur under the Proposed Action. For operations in BRSF, to the extent possible operations would use established, hardened boat ramps for ingress/egress of amphibious craft. If ingress/egress must utilize natural habitat in wetlands, care would be taken to prevent destruction of wetland vegetation or other activities that might cause shoreline erosion. Ingress/egress points at nonhardened locations for both persomel and watercraft would be rotated to allow sites time to recover from amphibious operations.	
	Amphibious operations in THSF would only be conducted at established boat landing sites along the shoreline of Apalachicola Bay. General Operational Constraints identified in Section 2.5 of the EIS would be implemented to minimize potential adverse impacts.	
	Therefore, the Proposed Action would be consistent with Florida's statutes and regulations regarding the protection of coastal areas.	
Chapter 163. Part II Growth Policy, County and Municipal Planning: Land Development Regulation	Local government agencies will be provided the opportunity to review and comment on the GRASI Landscape Initiative EIS. This review would ensure that the Proposed Action would be consistent with local government comprehensive plans.	Provide for the implementation of comprehensive planning programs to guide and control future development of the state.
Chapter 186 State and Regional Planning	State and regional agencies will be provided the opportunity to review and comment on the GRASI Landscape Initiative EIS. This review would ensure that the Proposed Action would be consistent with the state comprehensive plan.	Provides direction for the delivery of governmental services, a means for defining and achieving the specific goals of the state, and a method for evaluating the accomplishment of those goals in regards to the state comprehensive plan.

Chapter 252 Emergency Management	There is the potential for increased wildfire occurrences associated with training activities. While the potential for increased wildfire occurrence probability cannot be completely avoided under implementation of the Proposed Action, the constraints identified in Section 2.5 of the EIS would serve to minimize the potential for wildfire probability and provide mechanisms for adequate wildfire response. The Proposed Action would be consistent with Florida's statutes and regulations regarding the state's vulnerability to natural disasters and disaster response procedures.	Directs the state to reduce the vulnerability of its people and property to natural and mammade disasters; prepare for, respond to and reduce the impacts of disasters; and decrease the time and resources needed to recover from disasters.		
Chapter 253 State Lands	Overall, the Air Force has not identified any changes to land use designations or significant land use conflicts, and no significant adverse impacts to land use associated with training activities have been identified. Operational constraints identified in Section 2.5 of the EIS would be incorporated into an operating agreement with the FFS; measures would be taken to avoid conflicts with the public and minimize any potential impacts from restricted access. The Proposed Action would be consistent with Florida's statutes and regulations regarding the acquisition, administration, management, control, supervision, conservation, protection, and disposition of public lands.	Addresses the acquisition, administration, management, control, supervision, conservation, protection, and disposition of all state lands.		
Chapter 258 State Parks and Preserves	The Proposed Action would adhere to respective State Forest Management Plan and Aquatic Preserve Management Plan requirements. The training activities under the Proposed Action would not result in significant adverse impacts to recreation at BRSF or THSF. As described in Section 2.5 of the EIS, scheduling for training activities would constrain the time, frequency, and types of activities to avoid conflicts with hunters, campers, boaters, and other recreational users. Some transient recreational users, such as hikers, may be disturbed by noise from aircraft operations. Operational constraints identified in Section 2.5 of the EIS would be	Addresses the state's administration o state parks, aquatic preserves, and recreation areas.		

incorporated into an operating agreement with the FFS: measures would be taken to avoid conflicts with the public and minimize any potential impacts from restricted access. The Proposed Action would be consistent with Florida's statutes and regulations regarding the management of state parks, aquatic preserves and recreational areas. Chapter 259 Addresses public ownership of natural The major recreation areas at BRSF include Land Acquisitions for Bear Lake Recreation Area, Bone Creek areas for purposes of maintaining the Conservation or Recreation Recreational Area, Camp Paquette, state's unique natural resources: Coldwater Recreation Area, Hurricane protecting air, land, and water quality; Lake Recreation Area, Karick Lake promoting water resource development Recreation Area, and the Krul Recreation to meet the needs of natural systems and citizens of this state; promoting Area. These recreation areas provide opportunities for camping swimming, restoration activities on public lands: picnicking. hiking. canoeing, fishing, and providing lands for natural resource horseback riding, and mountain biking as based recreation. well as other activities permitted in Florida state forests. BRSF also contains three separate Wildlife Management Areas (WMAs) including the Blackwater WMA. the Blackwater Carr Unit, and the Blackwater Hutton Unit. These WMAs provide opportunities for hunting. horseback riding, wildlife viewing, cycling, canocing, and fishing. The entire THSF is part of an approximately 200,000-acre WMA that provides opportunities for recreational activities, including horseback riding (where permitted), camping (where permitted), fishing, wildlife viewing, biking, picnicking, off-highway vehicle use, and canoeing. Temporary disturbance to transient recreational users from noise during training activities is possible. Impacts to other recreational users and adjacent landowners would be minimized through implementation of operational constraints identified in Section 2.5 of the EIS, and avoidance of noise-sensitive areas. Minor, short-term small-scale closures of areas (HLZs/DZs, road segments) during training activities represent less than one-half of one percent of the total areas for the forests. These short-term closures would not preclude use of the forest and access would be allowed once training activities cease. At BRSF, the Short-Term Offender

	Program (STOP) Camp and Santa Rosa Youth Academy (SRYA) sites are currently not open to the public, and this would not change if the Air Force utilizes these locations. No conflicts with hunters have been identified since day-time training activities would be restricted during hunting season. While the quality of the recreational experience may be somewhat diminished by these impacts, this would not preclude recreational use or cause general incompatibility, and impacts would be short term.	
	Operational constraints identified in Section 2.5 of the EIS would be incorporated into an operating agreement with the FFS: measures would be taken to avoid conflicts with the public and minimize any potential impacts from restricted access.	
	The Proposed Action would be consistent with Florida's statutes and regulations regarding the management of conservation and recreation state lands.	
Chapter 260 Florida Greenways and Trails Act	Blackwater River State Forest is part of the Florida National Scenic Trail. The Air Force would provide appropriate access points and proper signage to provide safe crossings for recreational trail users during training activities.	Statewide system of greenways and trails established in order to conserve, develop, and use the natural resources of Florida for healthful and recreational purposes.
	Therefore, the Proposed Action would be consistent with Florida's statutes and regulations regarding the Greenways and Trails Program.	
Chapter 267 IIistorical Resources	Emitter site establishment and use are unlikely to impact cultural resources. Sites have been previously developed with adequate infrastructure in place.	Addresses the management and preservation of the state's archaeological and historical resources.
	Approximately 1,185 acres have been surveyed within BRSF. There are 196 known archaeological sites ranging in age from twentieth century historic contexts to the Paleo-Indian period; most of the 196 sites have not been evaluated for eligibility on the National Register of Historic Places (NRHP). Two historic cemeteries have been identified on BRSF and one NRHP eligible historic structure is located within the boundaries of BRSF.	
	Approximately 3,780 acres have been surveyed within THSF. There are 35 known	

archaeological sites ranging in age from twentieth century historic contexts to the Early Archaic period; most of the 35 sites have not been evaluated for eligibility on the NRHP. One historic district, Camp Gordon Johnson, formerly occupied the castern half of THSF and one historic cemetery has been identified in Tactical Area (TA)-3. Appendix F of the EIS lists sites considered potentially eligible along with those that remain unevaluated. Potential adverse impacts to cultural resources may occur from land disturbance activities, dismounted movement, and amphibious operations due to ground disturbance. Impacts mainly consist of potential disturbance or inadvertent discovery of previously unidentified cultural resources in both surveyed and unsurveyed areas. Ground disturbing activities will not occur in unsurveyed areas, and known cultural resource locations would be avoided as part of general operational constraints (see Section 2.5 of the EIS). The Air Force will conduct National Historic Preservation Act (NHPA) Section 106 consultation with the Advisory Council on Historic Preservation (ACHP), Florida State Historic Preservation Office (SHPO), and applicable Native American tribes for this Proposed Action. Any resulting mitigations from the Section 106 Consultation would be followed. Therefore, the Proposed Action would be consistent with Florida's statutes and regulations regarding the state's archaeological and historical resources. Chapter 288 Overall, tourism and outdoor recreational Promotes and develops general Commercial Development activities such as picnicking, camping, business, trade, and tourism and Capital Improvements boating, fishing, and hunting would not be components of the state economy adversely affected by the use of BRSF or THSF for training activities. Implementation of the Proposed Action would not prevent these activities from occurring in the same capacity as the baseline condition. Operational constraints identified in Section 2.5 of the EIS would be incorporated into an operating agreement with the FFS: measures would be taken to avoid conflicts with the public and

	minimize any potential impacts from restricted access.	
	Therefore, the Proposed Action would be consistent with Florida's statutes and regulations regarding future business opportunities on state lands, or the promotion of tourism in the region.	
Chapter 334 Transportation Administration	The Proposed Action would not affect transportation.	Addresses the state's policy concerning transportation administration.
Chapter 339 Transportation Finance and Planning	The Proposed Action would not affect the finance and planning needs of the state's transportation system.	Addresses the finance and planning needs of the state's transportation system.
Chapter 373 Water Resources	Emitter site establishment and use would not be expected to result in impacts to water resources. Water resources at BRSF include the watersheds of the Blackwater River and its tributaries, a portion of the Yellow River watershed and its tributaries, the sand and gravel and Floridan aquifers, and areas of wetlands and floodplains associated with the Blackwater River, Yellow River and their tributaries. There are 27,222 acres of wetlands at BRSF, including nearly 26,414 acres of palustrine or freshwater wetlands, 495 acres of lacustrine wetlands, and 313 acres of riverine wetlands. Water resources at THSF include the watersheds of Ochlockonee River, New River and Whiskey George Creek (part of the Apalachicola River basin), the Floridan aquifer, and extensive areas of wetlands and floodplains throughout the area. There are 181,476 acres of wetlands at THSF, including nearly 179,949 acres of palustrine or freshwater wetlands, 1,300 acres of estuarine wetlands, and 183 acres of riverine wetlands. There are potential impacts to water resources from incidental surface disturbance activities, ground movements, bivouac, vehicle stream crossings, and amphibious operations. However, impacts would be minimized through implementation of General Operational Constraints identified in Section 2.5 of the EIS. These include:	Addresses sustainable water management: the conservation of surface and ground waters for full beneficial use: the preservation of natural resources. fish, and wildlife; protecting public land; and promoting the health and general welfare of Floridians.

Chapter 376 Pollutant Discharge	Training areas would be inspected after operations have ceased to ensure that no	Regulates transfer, storage, and transportation of pollutants, and
	incorporated into an operating agreement with the FFS: measures would be taken to avoid conflicts with the public and minimize any potential impacts from restricted access. The Proposed Action would be consistent with Florida's statutes and regulations regarding recreation on state lands.	
	unit training plans. Operational constraints identified in Section 2.5 of the EIS would be	
Chapter 375 Outdoor Recreation and Conservation Lands	Overall, outdoor recreational activities such as picnicking, camping, boating, fishing, and hunting would not be adversely affected by the use of BRSF or THSF for training activities. Implementation of the Proposed Action would not prevent these activities from occurring in the same capacity as the baseline condition. The Air Force will coordinate with the FFS to identify time and area constraints for training activities (e.g., avoidance of specific hunting seasons and associated areas) and incorporate these constraints into	Addresses the development of a comprehensive multipurpose outdoor recreation plan, with the purpose to document recreational supply and demand, describe current recreational opportunities, estimate the need for additional recreational opportunities, and propose the means to meet the identified needs.
	Therefore, the Proposed Action would be consistent with Florida's statutes and regulations regarding the water resources of the state.	
	With the exception of minor land improvement activities on unpaved road segments for airstrip establishment no land development activities have been proposed. Eglin Water Resources Office would coordinate all applicable permits in accordance with the Florida Administrative Code (FAC) prior to minor land improvement activities as necessary.	
	be allowed on steep slopes, streambanks/shorelines and wetlands.	
	to existing, approved roads and trails in each Tactical Area.	
	a 100-foot buffer zone around all surface water bodies (streams, ponds, and lakes), wetlands and floodplains.	
	water bodies (streams, ponds, and lakes), wetlands and floodplains. • Wheeled vehicle use would be restricted to existing, approved roads and trails in each Tactical Area. • Concentrated troop movements would not be allowed on steep slopes.	

Prevention and Removal	trash, ammunition boxes, wire, or other debris is left in the area.	cleanup of pollutant discharges.
	Forward Air Refueling Point/Hot Gas Operations (FARP/HGO) activities may only occur on hardened surfaces (e.g., concrete or asphalt), and are not likely to occur in the forests. Although spills and leaks could occur, it is anticipated that spills during refueling would be rare, since refueling is conducted under stremous process protocols for safety and accident prevention. Best practices to prevent and rapidly respond to spills, as outlined in the Eglin Air Force Base Oil and Hazardous Substance Contingency Plan, would be implemented during refueling to prevent accidents and reduce impacts. All spills and accidental discharges of petroleum, oils, lubricants, chemicals, hazardous waste or hazardous materials, regardless of the quantity, would be reported through the GRASI LI Liason and Eglin AFB within 4 duty hours of the spill occurrence.	
	Potential impacts from the use of pyrotechnics and non-lethal munitions would be minimized by the implementation of General Operational Constraints identified in Section 2.5 of the EIS.	
	Therefore, the Proposed Action would be consistent with Florida's statutes and regulations regarding the transfer, storage, transportation of pollutants, and cleanup of pollutant discharges.	
Chapter 377 Energy Resources	The Proposed Action would not affect energy resource production, including oil and gas, and/or the transportation of oil and gas.	Addresses regulation, planning, and development of the energy resources of the state: provides policy to conserve and control the oil and gas resources in the state.
Chapter 379 Fish and Wildlife Conservation	Emitter site establishment and use would not be expected to result in impacts to biological resources, because sensitive habitats and protected species would be avoided. The small footprint (approximately 0.5 acres) of the emitter equipment and the use of improved and semi-improved areas would not damage native vegetation or displace wildlife. For BRSF and THSF, training activities	Establishes the framework for the management and protection of the state of Florida's wide diversity of fish and wildlife resources.
	would be restricted within known sensitive species habitat. There are potential impacts to biological resources from incidental	

*	•	·
	disturbances associated with dismounted maneuvers, vehicle stream crossings, aircraft noise, and amphibious operations. These impacts would be of minor intensity and short-term in duration, Impacts have also been identified associated with increased wildfire potential resulting from training activities. The intensity of potential impacts is minimized through implementation of General Operational Constraints identified in Section 2.5 of the EIS. As a result of potential impacts to protected species, Eglin Natural Resources has prepared an Endangered Species Act (ESA) Section 7 consultation for the U.S. Fish and Wildlife Service (USFWS). All requirements resulting from this consultation will be followed.	
	Therefore, the Proposed Action would be consistent with Florida's statutes and regulations regarding the protection of fish and wildlife resources of the state.	
Chapter 380 Land and Water Management	Under the Proposed Action, development of state lands with regional impacts would not occur. No changes to coastal infrastructure such as capacity increases of existing coastal infrastructure, or use of state funds for infrastructure planning, designing or construction would occur.	Establishes land and water management policies to guide and coordinate local decisions relating to growth and development.
Chapter 381 Public Health, General Provisions	The Proposed Action would not affect the state's policy concerning the public health system.	Establishes public policy concerning the state's public health system.
Chapter 388 Mosquito Control	The Proposed Action would not affect mosquito control efforts.	Addresses mosquito control efforts in the state.
Chapter 403 Environmental Control	Training activities would result in small amounts of air emissions, the majority of which would not result in adverse impacts at either state forest. There are potential impacts to water resources from incidental surface disturbances associated with ground movement, bivouac, vehicle stream crossings, and amphibious operations. However, impacts would be minimized through implementation of General Operational Constraints identified in Sections 2.5 of the EIS. The Eglin Water Resources Office would coordinate all applicable permits in accordance with the	Establishes public policy concerning environmental control in the state.

	Florida Administrative Code (FAC) prior to land improvement activities as necessary.	
	Training areas would be inspected after operations have ceased to ensure that no trash, ammunition boxes, wire, or other debris is left in the area. Potential impacts from the use of pyrotechnics and non-lethal munitions would be minimized by the implementation of General Operational Constraints identified in Section 2.5 of the EIS.	
	Therefore, the Proposed Action would be consistent with the State's policies concerning air quality, water quality, pollution control, solid waste management, and other environmental control efforts.	
Chapter 553 Building and Construction Standards	The Proposed Action would not include construction of buildings.	Addresses building construction standards and provides for a unified Florida Building Code.
Chapter 582 Soil and Water Conservation	Emitter site establishment and use would not be expected to negatively affect any soils because all sites are either "improved" or "semi-improved." Most sites would require few, if any, minor improvements to support the emitters.	Provides policy regarding the control and prevention of soil erosion.
	Land improvement activities would be limited to minor improvement of small road segments (four segments in BRSF, three segments in THSF) for airstrip use and would be limited to existing road beds.	
	Clear zones for airfields would be cleared as part of normal forestry operations: the Air Force would not clear any areas in support of airstrip establishment. Airstrips within poorly suited areas (see Section 3.6.3 of the EIS) can only be established on existing roadways that do not require land disturbance outside the existing road bed or right-of-way. This limits the potential for adverse impacts associated with soil crosion.	
	There are potential impacts to soils resulting from airstrip establishment and use, HLZ/DZ use, ground movement, bivonac, vehicle stream crossings, and amphibious operations. The extent of these impacts is minimized through implementation of General Operational Constraints identified in Section 2.5 of the EIS.	

	Therefore, the Proposed Action would be consistent with Florida's statutes and regulations regarding soil and water conservation efforts.	
Chapter 597 Aquaculture	For amphibious operations in the streams and rivers of BRSF and THSF, to the extent possible operations would use established, hardened boat ramps for ingress/egress of amphibious craft. If ingress/egress must utilize natural habitat in wetlands, care would be taken to prevent destruction of wetland vegetation or other activities that might cause shoreline crosion. Ingress/egress points at nonhardened locations for both personnel and watercraft would be rotated to the extent possible to allow sites time to recover from amphibious operations.	Establishes public policy concerning the cultivation of aquatic organisms of the state. Addresses state aquaculture plan which provides for the coordination and prioritization of state aquaculture efforts, the conservation and enhancement of aquatic resources and provides mechanisms for increasing aquaculture production.
	Apalachicola Bay is a State Aquatic Preserve with designated uses such as shellfish propagation and harvesting. Therefore, amphibious operations along the shoreline of Apalachicola Bay in THSF would only be conducted at established boat landing sites.	
	Therefore, the Proposed Action would be consistent with Florida's statutes and regulations regarding state aquaculture and conservation of aquatic resources.	

C.3 BIOLOGICAL ASSESSMENT

The Air Force conducted ESA Section 7 consultation with the U.S. Fish and Wildlife Service (USFWS) for this Proposed Action; the Air Force has made a determination that the action may affect but is not likely to adversely affect endangered species and has received concurrence from the USFWS. A copy of the Biological Assessment is included in this appendix.



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 96TH TEST WING (AFMC)
EGLIN AIR FORCE BASE FLORIDA

Mr. Thomas L. Chavers Chief, Eglin Natural Resources 501 De Leon Street, Suite 101 Eglin AFB FL 32542-5133

JAN 2 2 2014

Dr. Donald Imm U.S. Fish and Wildlife Service 1601 Balboa Avenue Panama City FL 32405

Dear Dr. Imm:

The attached Informal Biological Assessment is being submitted to fulfill requirements under Section 7 of the Endangered Species Act (ESA). This Biological Assessment analyzes potential impacts to the red-cockaded woodpecker (RCW), wood stork, reticulated flatwoods salamander and critical habitat, frosted flatwoods salamander and critical habitat, priping plover and critical habitat, purple bankclimber and critical habitat, Choctaw bean and critical habitat, narrow pigtoe and critical habitat, southern sandshell and critical habitat, fuzzy pigtoe and critical habitat, Godfrey's butterwort, Florida skullcap, white birds-in-a-nest, and telephus spurge. This consultation also considers the gopher tortoise, bald eagle, several federally petitioned species, and multiple state-listed species.

The Proposed Action identified in the Gulf Regional Airspace Strategic Initiative (GRASI) Landscape Initiative (GLI) Environmental Impact Statement (EIS) is for the Air Force to conduct nonhazardous training activities on Blackwater River State Forest (BRSF) and Tate's Hell State Forest (THSF) and to use of emitter sites at various remote locations in northwest Florida. Training activities would involve some minor land disturbance (no land development), use of wheeled vehicles on established roads only, cross-country troop movements, bivouacking, helicopter and light aviation landings on established landing zones (existing roads and cleared areas), amphibious operations, and use of blank ammunition and pyrotechnics in select areas. Use of the forests would be accomplished through lease agreements with the Florida Forest Service (FFS).

Based on analysis of potential direct physical impacts, noise, and habitat impacts associated with the Proposed Action, GLI activities may affect, but are not likely to adversely affect the federally protected species listed above. Implementation of the conservation measures listed in Section 2.3 of the Biological Assessment will minimize the potential for negative impacts to protected species from GLI activities.

Due to the complex nature of this Proposed Action, Eglin would be happy to provide a briefing of the proposed activities and the process by which Eglin plans to ensure conservation measures are implemented for the action. If you have any questions regarding this Biological Assessment or any of the proposed activities, please do not hesitate to contact either Mr. Jeremy Preston (850)-883-1153, Mr. Bruce Hagedorn (850) 882-8421, or myself at (850) 882-0143.

Sincerely,

THOMAS L. CHAVERS, GS-13

Attachment:

Informal Biological Assessment for the Gulf Regional Airspace Strategic Initiative (GRASI) Landscape Initiative Training Areas



United States Department of the Interior



FISH AND WILDLIFE SERVICE

Field Office 1601 Balboa Avenue Panama City, FL 32405-3721

Tel: (850) 769-0552 Fax: (850) 763-2177

April 8, 2014

Mr. Thomas L. Chavers Chief, Eglin Natural Resources 501 De Leon Street, Suite 101 Eglin AFB, FL 32542-5133

> Re: USFWS #04EF3000-2014-I-0107 Date Started: February 10, 2014 Action Agency: Eglin Air Force Base

Project Title: Gulf Regional Airspace Strategic Initiative (GRASI) Landscape Initiative Training

Areas

Location: Eglin Air Force Base Ecosystem: Northeast Gulf

Counties: Santa Rosa, Okaloosa, Walton, and

Franklin, Florida

Dear Mr. Chavers:

This letter acknowledges the U. S. Fish & Wildlife Service's (Service) receipt of your letter dated January 22, 2014, and biological assessment (BA) dated January 2014, requesting informal consultation in accordance with Section 7 of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.) and the Sikes Act of 1960, as amended (16 U.S.C. 670a et seq.) We received you letter and BO on February 10, 214 relative to impacts with the Gulf Regional Airspace Strategic Initiative (GRASI) Landscape Initiative (GLI) actions.

The Proposed Action identified in the GRI Environmental Impact Statement is for the Air Force to conduct nonhazardous training activities on Blackwater River State Forest (BRSF) and Tate's Hell State Forest (THSF) and to use emitter sites as various remote locations in northwest Florida. Training activities would involve some minor land disturbance (no land development), use of wheeled vehicles on established roads only, cross-country troop movements, bivouacking, helicopter and light aviation landings on established landing zones (existing roads and cleared areas), amphibious operations, and use of blank ammunition and pyrotechnics in select areas. Use of the forests would be accomplished through lease agreements with the Florida Forest Service.

The GLI is a United States Air Force-led partnership with the State of Florida and other state and federal agencies to improve the flexibility of the region to safely host military test and training

Mr. Chavers

operations. The Proposed Action is needed because there is a projected regional shortfall of military training and testing land and airspace in the GRASI region. This action would improve scheduling flexibility and reduce competing demands on restricted areas.

Based on incorporation of Conservation Measures into the project plans, Eglin's AFB's Natural Resource Section's (NRS) determination of effects to the protected species and the Service's responses per action are summarized within Table 1 below.

				Action		NRS Effects	
Species	Scientific Name	Location	Direct Physical Impact	Harassment	Habitat Impact	Determination - individuals/ critical habitat	FWS Response
Red- cockaded	Picoides	BRSF	No effect	X	Х	Not likely to adversely	Concur
Woodpecker	borealis	THSF	No effect	X	X	affect	
Wood Stork	Mycteria americana	THSF	No effect	X	X	Not likely to adversely affect	Concur
Reticulated flatwoods salamander*	Ambystoma bishopi	BRSF	x	No effect	х	Not likely to adversely affect/ modify habitat	Concur
Frosted flatwoods salamander*	Ambystoma cingulatum	THSF	X	No effect	X	Not likely to adversely affect/ modify habitat	Concur
Eastern	Drymarchon	BRSF	X	X	X	Not likely to	C
indigo snake	couperi	THSF	X	X	X	adversely affect	Concur
Piping plover*	Charadrius melodus	THSF	Х	х	No effect	Not likely to adversely affect/ no effect	Concur
Gulf	Acipenser	BRSF	X	X	X	Not likely to adversely	
sturgeon*	oxyrinchus desotoi	THSF	Х	Х	X	affect/ modify habitat	Concur
Purple bankclimber *	Elliptoideus sloatianus	THSF	No effect	No effect	х	Not likely to adversely affect/ modify habitat	Concur

Mr. Chavers

Chactaw bean*	Villosa choctawensis	BRSF	No effect	No effect	х	Not likely to adversely affect/ modify habitat	Concur
Narrow pigtoe*	Fusconaia escambia	BRSF	No effect	No effect	х	Not likely to adversely affect/ modify habitat	Concur
Southern sandshell*	Hamiota australis	BRSF	No effect	No effect	х	Not likely to adversely affect/ modify habitat	Concur
Fuzzy pigtoe*	Pleurobema strodeanum	BRSF	No effect	No effect	х	Not likely to adversely affect/ modify habitat	Concur
Godfrey's butterwort	Pinguicula ionantha	THSF	Х	No effect	Х	Not likely to adversely affect	Concur
Florida skullcap	Scutellaria floridana	THSF	Х	No effect	х	Not likely to adversely affect	Concur
White birds- in-a-nest	Macbridea alba	THSF	х	No effect	х	Not likely to adversely affect	Concur
Telephus spurge	Euphorbia telephioides	THSF	х	No effect	х	Not likely to adversely affect	Concur

^{*}Critical habitat for this species is also present on or adjacent to the state forests.

In summary, we concur with the BA's determination of not likely to adversely affect individuals and for no effect or not likely to adversely modify critical habitat. We have assigned log number USFWS #04EF3000-2014-I-0107 to this informal consultation.

The Service does have two recommendations that we would like to have incorporated within the GRASI LSI operational plan to address conservation of federal species of concern Westfall's clubtail, *Gomphus westfalli*, and low water crossings. Westfall's clubtail is a northwest Florida endemic dragonfly that utilizes spring and boggy streams for part of its life cycle and is only known from a few locations, including the Blackwater fish hatchery. Due to this, the Service is requesting a two mile radial buffer around the fish hatchery where no low water crossings will be used and no water related training will occur. The BA identified 244 possible low water crossings (Poor = 83, Fair = 125, and Good = 36) that could be used for military training. To minimize potential impacts from training, we recommend that both the good and the poor rated

Mr. Chavers 4

low water crossings be removed from training use in an effort to protect the best and to prevent further degradation of the poor sites.

Thank you for providing us with the opportunity to comment on this project. Please contact Lisa Lehnhoff of this office at extension 225 for additional information and coordination.

Sincerely,

Dr. Donald W. Imm Project Leader

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Mr. Chavers	5
Location: S:\Staff\Lisa\Military Bases	
	Vi.

EGLIN AIR FORCE BASE Florida

U.S. FISH AND WILDLIFE SERVICE

FINAL

INFORMAL ENDANGERED SPECIES ACT SECTION 7 CONSULTATION FOR THE GULF REGIONAL AIRSPACE STRATEGIC INITIATIVE (GRASI) LANDSCAPE INITIATIVE TRAINING AREAS

EGLIN AFB, FL



JANUARY 2014

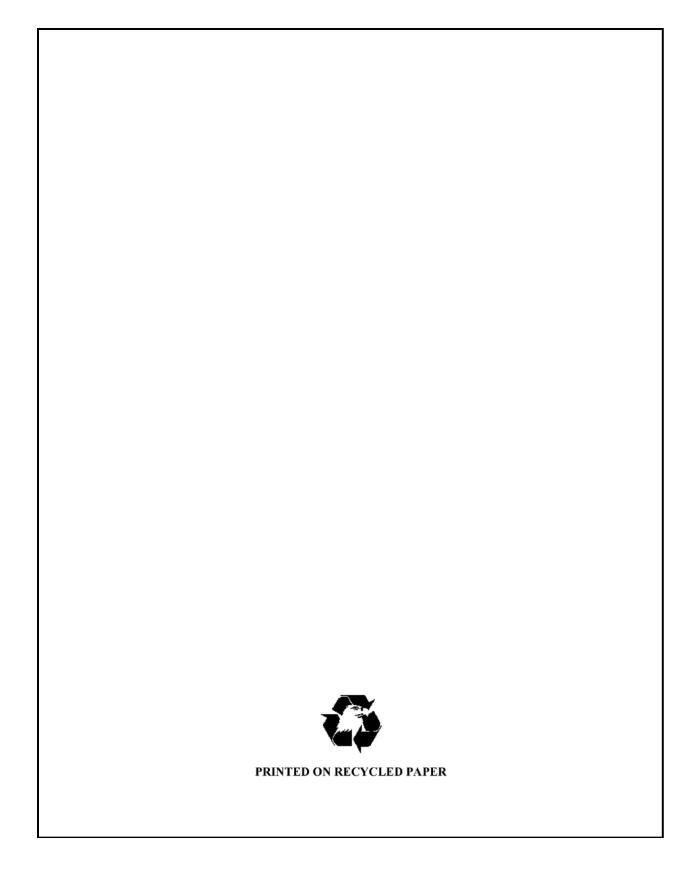


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LIST OF ACRONYMS, ABBREVIATIONS, AND SYMBOLS

7SFG(A)	7 th Special Forces Group (Airborne)	RSOP	Range Standard Operating Procedure		
ac	Acre	RCW	Red-cockaded woodpecker		
AFB	Air Force Base	REA	Range Environmental Assessment		
AFSOC	Air Force Special Operations Command	SRYA	Santa Rosa Youth Academy		
AFI	Air Force Instruction	SSC	Species of Special Concern		
AGL	Above ground level	STOP	Short-term Offender Program		
ATV	All terrain vehicle	TA	Tactical Area		
BA	Biological Assessment	THSF	Tate's Hell State Forest		
BRSF	Blackwater River State Forest	TES	Threatened and Endangered Species		
cm	Centimeters	U.S.	United States		
DBH	Diameter at Breast Height	USF	University of South Florida		
DoD	Department of Defense	USFWS	U.S. Fish and Wildlife Service		
DPI	•	USE WS	0.5. Fish and whathe service		
DZ	Direct physical impact Drop zone				
EAFB	Eglin Air Force Base				
EAFBI	Eglin Air Force Base Instruction				
	0				
EIS	Environmental Impact Statement				
EM	Environmental Management Directorate				
EMR	Electro-magnetic radiation				
ESA	Endangered Species Act				
FARP	Forward air refueling point				
FDACS	Florida Department of Agriculture & Consumer Service	es			
FFS	Florida Forest Service				
FL	Florida				
FNAI	Florida Natural Areas Inventory				
FS	Forestry Site				
ft	Foot or Feet				
FWC	Florida Fish and Wildlife Conservation Commission				
FY	Fiscal Year				
GBS	Ground burst simulator				
GIS	Geographic Information System				
GLI	GRASI Landscape Initiative				
GPS	Global Positioning System				
GRASI	Gulf Regional Airspace Strategic Initiative				
ha	Hectare				
Н	Harassment				
Hb	Habitat impact				
HGO	Hot gas operation				
HLZ	Helicopter landing zone				
HMMWV	High mobility multi-purpose wheeled vehicle				
INRMP	Integrated Natural Resources Management Plan				
LI	Landscape Initiative				
LZ	Landing zone				
LOS	Line of sight				
LU-1	Limited Use-I				
LU-2	Limited Use-2				
MLLW	Mean lower low water				
NAS	National Audubon Society				
NI	no impact				
PEA	Programmatic Environmental Assessment				
PBG	Potential Breeding Group				
PIP	Propellant Initiation Program				
POL	Petroleum oil and lubricants				

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Petroleum, oil, and lubricants

Primary Recruitment Clusters

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PRCs

1. INTRODUCTION

This Biological Assessment (BA), developed by Eglin Air Force Base (AFB) Natural Resources, is meant to fulfill the requirements of the Endangered Species Act (ESA) for assessing potential impacts to federally listed species. This consultation addresses Department of Defense (DoD) nonhazardous training activities associated with the Gulf Regional Airspace Strategic Initiative (GRASI) Landscape Initiative (GLI) on Blackwater River State Forest (BRSF) and Tate's Hell State Forest (THSF) and the use of emitter sites at various remote locations in northwest Florida (Figure 1-1, Figure 1-2, and Figure 1-3). This BA assesses potential impacts from the use of these areas for the emitters and training activities on the federally listed red-cockaded woodpecker (RCW), wood stork, reticulated flatwoods salamander and critical habitat, frosted flatwoods salamander and critical habitat, eastern indigo snake, Gulf sturgeon and critical habitat, piping plover and critical habitat, purple bankclimber and critical habitat, Choctaw bean and critical habitat, narrow pigtoe and critical habitat, southern sandshell and critical habitat, fuzzy pigtoe and critical habitat, Godfrey's butterwort, Florida skullcap, white birds-in-a-nest, and telephus spurge. This consultation also considers the gopher tortoise, bald eagle, several federally petitioned species, and multiple state-listed species.

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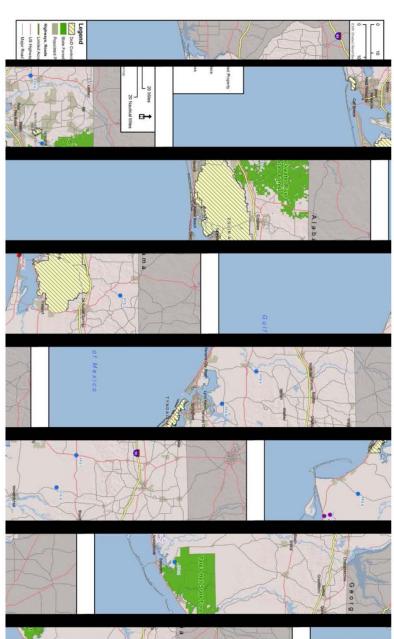


Figure 1-1. Location of Blackwater River and Tate's Hell State Forests, and Proposed Emitter Sites

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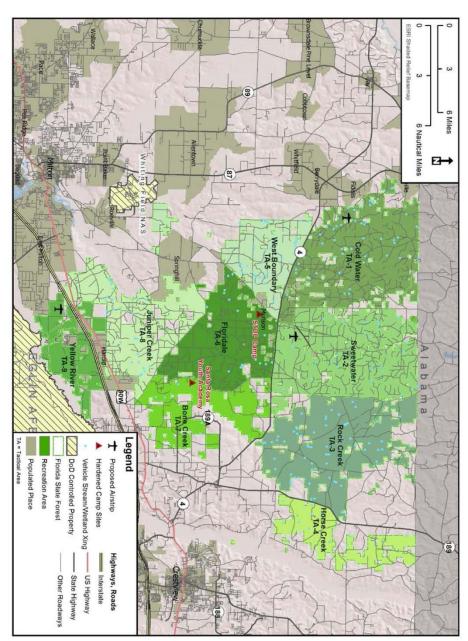
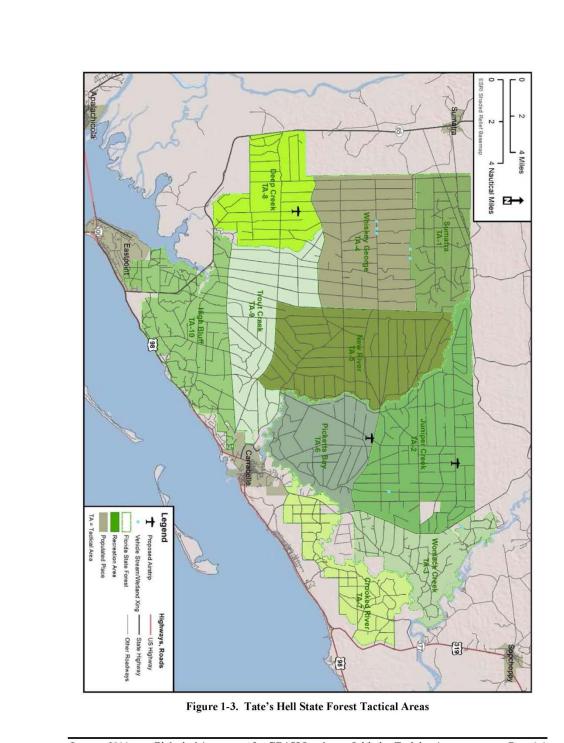


Figure 1-2. Blackwater River State Forest Tactical Areas

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2. DESCRIPTION OF PROPOSED ACTION

2.1 PROPOSED ACTION

This BA describes the potential consequences to federally listed species that may result from non-hazardous military training operations and the use of emitters within the GLI area (Figure 1-1, Figure 1-2, and Figure 1-3). The GLI is a United States (U.S.) Air Force-led partnership with the State of Florida and other state and federal agencies to improve the flexibility of the region to safely host military test and training operations. The Proposed Action is needed because there is a projected regional shortfall of military training and testing land and airspace in the GRASI region. Presently, the demand for restricted areas of airspace over Eglin AFB for high priority testing missions creates scheduling conflicts for lower priority nonhazardous training operations. The Proposed Action would improve scheduling flexibility and reduce competing demands on restricted areas.

2.2 SCOPE OF THE PROPOSED ACTION

The scope of the GLI encompasses the BRSF (~210,400 acres) and THSF (~202,400 acres) for general training operations, and small land areas at various locations in northwest Florida for permanent and mobile radar emitter sites (Figure 1-1). Training activities would involve some minor land disturbance (no land development), use of wheeled vehicles on established roads only, cross-country troop movements, bivouacking, helicopter and light aviation landings on established landing zones (existing roads and cleared areas), amphibious operations, and use of blank ammunition and pyrotechnics in select areas. Use of the forests would be accomplished through lease agreements with the Florida Forest Service (FFS).

2.2.1 Emitter Sites

The Proposed Action would include establishment of up to 12 radar, telemetry, and emitter sites on FFS and Florida Fish and Wildlife Conservation Commission (FWC) lands in northwest Florida at areas that are already "improved" or "semi-improved" to be used for tracking aircraft and navigation (Figure 1-1, Table 2-1). Most sites can accommodate line of sight (LOS) requirements without improvements; however, at two sites (FFS-8, FFS-9) some minor tree clearing/topping (less than 0.5 acres) would improve LOS. Power generation at each site would be provided either by generator or connection to available utilities. Some sites have available fencing, while others do not and may require fencing if used as a "temporary" site.

2.2.2 Training Activities in Northwest Florida State Forests

The Proposed Action consists of a number of different land, water, and air training activities, which currently occur on the Eglin AFB Range and are evaluated in detail in the Estuarine Riverine Programmatic Environmental Assessment, Santa Rosa Island Range Environmental Assessment (REA), and Interstitial Areas REA Revision 2 (U.S. Air Force, 2004; U.S. Air Force, 2012; U.S. Air Force, 2013a). The Air Force proposes to utilize BRSF and THSF for some of these activities; however, even at full program implementation, forest lands

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would be used for only a relatively small percentage of training activities currently occurring on Eglin AFB. The frequency of use may increase gradually from no use up to the maximum-use scenario described in the Environmental Impact Statement (EIS). Training activities could occur in any of the "tactical areas" (TAs) shown in Figure 1-2 and Figure 1-3, with consideration of restrictions identified in the GRASI LI EIS and those determined through coordination with the FFS.

Table 2-1. Summary of Emitter Types and Proposed Locations

Site Identifier	Description	Security
FWC-1	Semi-improved, cleared area – both sites adjacent to each other.	Fencing required
FWC-2		for temporary use.
EAFB-1	EAFB-1 Henderson Beach location – owned and operated by Air Force. Security FFS-1 Coldwater FS– improved site with paved areas, buildings, and watch tower.	
FFS-I		
FFS-2	East Bay FS – improved site with paved areas, buildings, and watch tower.	
FFS-3	FFS-3 Semi-improved area near Jackson Still FFS tower site. Fencing FFS-4 Semi-improved area near Moddy FFS tower site. for terr	
FFS-4		
FFS-5	Molino FS – improved site with paved areas, buildings, and watch tower. Secur	
FFS-6	FFS-6 White City FS – improved site with payed areas, buildings, and watch tower.	
FFS-7	Youngstown FS – improved site with paved areas, buildings, and watch tower.	
FFS-8	Semi-improved area near Smith FFS tower site.	Fencing required for temporary use.
FFS-9	Vicksburg FS – improved site with paved areas, buildings, and watch tower.	Security available.

EAFB = Eglin Air Force Base; FFS = Florida Forest Service; FS = Forestry Site; FWC = Florida Fish and Wildlife Conservation Commission

The intent for implementing GRASI GLI training would be to start slowly and increase nonhazardous training utilization of THSF or BRSF to acceptable levels that can compatibly be supported by the FFS. Training would only be implemented to the extent that DoD units need the additional off-base training capacity to support nonhazardous activities. Due to safety limitations and existing policy, activities using live fire and dudded munitions would not be conducted in proposed GRASI training areas. Because of these limitations and increased travel times required to access BRSF and THSF, total use of THSF or BRSF is anticipated to be well below the utilization rates of dedicated military ranges, which are utilized up to 232 days per year. Training utilization rates would be further reduced during hunting season and other times when military use would not be compatible with existing land uses. Numbers of personnel used during training activities typically range from 10 to 50 and may involve any number and type of vehicles. Personnel would travel to BRSF either by road or aircraft as part of a training exercise. Because of distance (150 to 200 miles depending on route taken), road travel to THSF would be infrequent, and most training activities would be associated with air transport of personnel and equipment to THSF tactical areas.

The following subsections detail proposed training activities, which would be carried out as part of either small unit training events or larger regional training exercises These activities would be

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carried out by units of the Air Force Special Operations Command (AFSOC), units of the 7th Special Forces Group (Airborne) [7 SFG(A)], F-35 Joint Strike Fighter and support units, and other DoD units. Training activities in the state forests would be conducted per the requirements of Eglin AFB Instruction (EAFBI) 13-212, *Range Planning and Operations*, Chapter 7 – Environmental Management (U.S. Air Force, 2010), as applicable, and in accordance with the respective state forest management plans. Additionally, training activities would implement, the Conservation Measures detailed in Section 2.3.

Helicopter Landing Zones/Drop Zones

Existing cleared areas within the state forests would be utilized as landing sites for helicopters and drop zones (DZs) for personnel and equipment from various aircraft (either fixed or rotary wing). Most HLZ/DZ locations will likely change over time based on open area availability and training needs. Existing FFS HLZs will also be used. At some sites, there may be improvements in the form of gravel surfaces.

Fixed-Wing Aircraft Landing Sites

Existing airfields and roadways would be used for fixed-wing aircraft landings, takeoffs, and touchdowns in support of training activities (Figure 1-2 and Figure 1-3). At BRSF, one existing airfield would be utilized (Munson Airfield), and two dirt roadways (one in TA-1 and one in TA-9) are proposed for aircraft operations. At THSF, three dirt roadways are proposed for aircraft operations. These roadways are located in TA-2, -6, and -8. Road improvements such as widening or compacting may be necessary; road widening would be limited to existing shoulder areas and would not involve direct physical impacts to wetlands or surface waters. There would be no paving or addition of impervious surface at any of the proposed landing sites, and their locations would not change in the near future.

Use of Expendables

Expendables use includes various training munitions and pyrotechnics during training activities. At BRSF, noise-generating expendables (e.g., blanks and ground burst simulators) would only be used at hardened camp site locations. Simulated munitions (consisting of plastic pellets or paintballs) and smoke grenades may be used during training activities described in this chapter in approved areas as detailed in Section 2.3. At THSF, noise-generating expendables could be used in approved areas as identified in Section 2.3. Table 2-2 lists details of maximum annual expendables activities.

Table 2-2. Expendables Usage Details

Expendable Type	Estimated Maximum Quantity Per Year	Estimated Average Per Event
5.56-millimeter blank	576,000	~10,000
7.62-millimeter blank	196,200	~8,000
Ground burst simulators	5.172	~2 to 5
M-18 smoke grenades	4.038	~2 to 5
Paintballs/plastic pellets	50,000	~5,000
Flares	Emergency use only – not associated	with training activities

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Light Aviation Proficiency Training

Light aviation proficiency training refers to fixed-wing aircraft takeoff and landing training that would occur at the established fixed-wing aircraft landing areas identified previously. Aircraft would fly from the surface to approximately 3,000 feet above ground level (AGL) 90 percent of the time and up to 10,000 feet AGL the remaining 10 percent of the time. Each training event could be up to 2 hours in duration and may occur day or night, at a maximum tempo of five times per day (spread among multiple landing sites).

Low-Level Helicopter Insertions/Extractions

Helicopters would be used to conduct personnel insertion and extraction training at HLZs/DZs using ropes, ladders, and other means. Helicopters would generally fly between just above surface/tree level and 3,000 feet AGL. En route to HLZs/DZs, helicopters would fly at 100 to 500 feet AGL. After arriving, about 50 percent of the time would be spent flying patterns within a one- to two-mile radius of the HLZ, with the remaining time spent either hovering (80 percent of this time) or on the ground with engines running and rotors turning. Hovering altitude ranges from 15 to 75 feet AGL. Each training event would be 30 minutes to 2 hours in duration, with up to 50 personnel involved. Training would be conducted two times per month (spread out among the HLZs/DZs), with 50 percent occurring at night (20 percent after 10:00 pm).

Temporary Combat Support Areas

Tents and other equipment would be set up around HLZs/DZs and fixed-wing aircraft landing areas to provide training support such as logistics and medical treatment of simulated casualties. Temporary defensive positions (e.g., sandbag bunkers) may be used. No digging would occur. Events could occur day or night.

Airdrops

During airdrop training, aircraft would insert and/or resupply personnel by release of troops or equipment over land-based DZs or over water. Aircraft would fly at 1,250 feet AGL for static line drops and up to 25,000 feet AGL for free fall drops. During a typical scenario, the aircraft would approach the DZ at 500 to 1,000 feet AGL, conduct the drop, and move to orbit at 5,000 feet AGL, offset from the DZ by 5 to 10 miles. Airdrops could occur up to four times per day, with up to 72 personnel participating.

Air/Land Vertical Lift

Air/Land Vertical Lift would involve the insertion and/or resupply of personnel and/or equipment by landing an aircraft directly into an HLZ or on a fixed-wing aircraft landing area. Aircraft would fly from the surface to approximately 3,000 feet AGL 90 percent of the time, and up to 10,000 feet AGL for the remaining time. Up to four training events could occur per day, with up to 72 personnel participating.

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Forward Air Refueling Point/Hot Gas Operations

These operations involve the transfer of fuel from aircraft to aircraft or refueling truck to aircraft with aircraft engines running. Fuel transport vehicles may range in capacity from several hundred to several thousand gallons and would travel between the training site and Eglin AFB. It is not likely that this activity would occur at BRSF because it is so close to Eglin AFB. This activity would only occur on hardened surfaces.

Cross-Country Dismounted Movements

Up to two times per quarter, personnel would move on foot across land areas from one location to another as part of simulated assault and reconnaissance training activities. Movements may occur day or night, on or off roads, or on unimproved trails. Movements may also include crossing of streams and wetland areas. Up to 72 personnel could be involved in each event.

Cross-Country Vehicle Movement

Up to three times per quarter, personnel transport vehicles would move across established roadways and associated easements from one location to another in support of resupply, logistics, and troop transport. Vehicles would include high-mobility multipurpose wheeled vehicles (HMMWVs), 2.5-ton trucks, all-terrain vehicles (ATVs), and other small vehicles (e.g., motorcycles).

Vehicle Stream and Wetland Crossing

Vehicle stream and wetland crossing involves military vehicles (listed in previous section) fording intermittent and perennial streams and wetlands at low water crossing points currently established and utilized by the FFS (Figure 1-2 and Figure 1-3). Training events could occur during daylight or nighttime hours up to three times per quarter, with up to ten vehicles per event.

Blackout Driving

Blackout driving involves nighttime operation of ATV-type vehicles and HMMWVs without full headlights. Headlights would be diminished to "cat eyes," which are essentially small slits placed over the headlights; this provides enough light to utilize night vision goggles while driving. Roads used for this activity would be temporarily closed (likely in concert with emplacement of obstacles, described below) to the public to prevent safety mishaps. Training events could occur up to three times per quarter, with up to ten vehicles per event.

Emplacement of Obstacles

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Concertina wire and barbed wire would be placed along unpaved roads and Hardened Camp Sites (discussed below) up to ten times annually. The ground surface could be slightly disturbed (within six inches of ground surface) from placement of stakes and pickets. All wire, stakes and/or pickets would be recovered after training is complete.

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Bivouacking/ Assembly Areas

This training activity involves the use of an area, mainly tented, where troops eat and rest overnight. There may be slight surface ground disturbance from placement of tent stakes and pickets. All expendables/equipment would be recovered prior to leaving the site. Up to ten training events could occur per year, with up to 72 personnel involved in each event.

Communications and Surveillance Operations

Communications and surveillance operations involve the use of sites to coordinate communications and/or conduct surveillance of "enemy forces." Communications equipment, radar equipment, and generators would be used during these operations. The ground surface may be slightly disturbed from placement of tent stakes and pickets. These operations would occur monthly and involve up to 72 personnel per event.

Amphibious Operations

Amphibious operations involve boat operations on the water, including loading/unloading of personnel to and from boats and movement in streams, rivers, bays, and lakes. Potential boat types include inflatable and rigid powered watercraft up to 28 feet in length and with outboard motors of 35 to 200 horsepower (e.g., Zodiacs or aluminum boats). Up to six watercraft could participate in each training event, with up to 10 events annually. Training could occur during daylight or nighttime hours.

Natural Resource Consumption

This training involves the procurement of natural food sources, such as small game and rodents (utilizing survival techniques such as trapping/snaring) and consumption of vegetation. Sensitive species and habitats would be avoided. Training could occur up to two times per quarter, day or night, with up to 20 personnel involved per training event.

Overwater Hoist Operations

This training involves hoist rescue and recovery of personnel and watercraft over water. Aircraft would conduct operations from just above the surface of the water to a height of about 150 feet. Aircraft would hover about 10 feet over the surface for drops and about 80 feet above the surface for retrievals. Training could occur up to once per month, day or night, for four to six hours per event.

Opposing Forces Vehicle Operation

During this training, two teams would compete to locate each other on established roads in a simulated urban environment. Personnel may exit vehicles to conduct "search activities." A light aircraft may be used to direct one of the teams; the aircraft would fly at between 16,000 and 23,000 feet AGL. Training could occur up to five times per week, day or night, with up to 10 vehicles/50 personnel per event.

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Hardened Camp Site Use

This training involves use of two hardened camp facilities located at BRSF. Both camps were established by the Florida State Department of Juvenile Justice and include the Short Term Offender Program (STOP) Camp and the Santa Rosa Youth Academy (SRYA) (Figure 1-2). These sites consist of buildings and infrastructure such as utilities and roadways, and may be used as insertion/extraction points, HLZs/DZs, command and control centers, training areas for combat in urban environment training, or other training activity support. A variety of aircraft and vehicle types could be used. Training could occur up to five times per week, day or night, with up to 50 personnel per event.

2.3 CONSERVATION MEASURES

The proponent will implement the following Conservation Measures as part of the Proposed Action to minimize or offset potential adverse impacts. This BA considers these requirements as part of the impact assessment. Additionally, the FFS will continue to support and protect their sensitive species and habitats as detailed in their forest management plans (i.e., operations and management plans for RCWs and fire).

Prior to implementation of the Proposed Action, the Air Force will:

- 1. Develop a Mitigation Plan identifying proposed resource-specific mitigations to be implemented, responsible parties for mitigation implementation and compliance evaluation, and monitoring mechanisms for evaluation of mitigation effectiveness.
- 2. Establish a Landscape Initiative Team composed of appropriate Eglin organizations to coordinate with pertinent Eglin offices/disciplines and the FFS. The Team will provide oversight to ensure the following requirements are implemented and the required supporting processes are established for implementation prior to any missions on state forest lands:
 - a. Develop real property leases/agreements that incorporate the conservation measures identified in this BA.
 - b. Develop and implement a methodology for scheduling training activities, through existing Eglin organizations, which incorporates the conservation measures identified in this BA, and addresses any violations, including enforcement.
 - c. Develop and implement a methodology to identify specific training areas and corridors prior to ground operations to allow for any natural resource surveys and protection measures that may be necessary (i.e., RCW surveys).
 - d. Develop and implement a methodology, through coordination with appropriate Eglin agencies and disciplines, for pre- and post-mission surveys of action areas to identify the extent of environmental impact to training areas, to correct any issues, and to adjust constraints and mitigations as necessary.
 - e. Identify designated boat landing areas for amphibious operations that occur in Gulf sturgeon and freshwater mussel critical habitat on the Yellow and Ochlocknee rivers, and in Apalachicola Bay and East Bay, preferably with improved surfaces.

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- f. Identify and implement funding/reimbursement mechanisms to pay for conservation measures.
- g. Develop addendums/attachments to EAFBI 13-212 Chapter 7 for BRSF and THSF to identify environmental considerations detailed in this BA.
- h. Develop a Wildfire Specific Action Guide for GLI activities at BRSF and THSF, including fire checks and restrictions on campfires and pyrotechnics use during high fire danger periods. Fire danger restrictions will be established cooperatively between the FFS and Eglin Wildland Fire Program. Restrictions will generally be as follows: On days when the local state forest Fire Danger Rating is Very High or Extreme, no pyrotechnics use or campfires will be allowed without prior approval of the Eglin Wildland Fire Program Manager and the state forest Fire Manager. For days with High Fire Danger, pyrotechnics will be restricted to hand-thrown simulators and smoke grenades, and are to be used only on roads or in pits; no campfires are allowed.
- Ensure compliance with environmental requirements by identifying the proper organizations responsible for management of each conservation measure, and ensuring the responsible organization has executed the intent of the applicable requirement.
- 3. Identify appropriate Eglin AFB program offices to implement the following conservation measures, with funding/support from training units:
 - a. Develop forest-specific guidance on environmental restrictions and compliance requirements, to include conservation measures identified in this BA (i.e., environmental briefings, EAFBI 13-212 addendum).
 - b. Coordinate with the FFS to identify time and area constraints for training activities (e.g., avoidance of sensitive areas) and incorporate these constraints into unit training plans.
 - c. Develop and implement a process that will notify Eglin Natural Resources of the dates and locations of upcoming training events to support spot surveys/inspections for compliance.
 - d. When determining preferred locations for HLZs/DZs and fixed-wing aircraft landing sites, ensure incorporation of protected species buffers where no aircraft operations are permitted (1,000 foot buffer around bald eagle nests from 01 October to 15 May, and 500-foot buffer around RCW trees and wood stork feeding/roosting habitat).
 - e. Provide conservation measures from this BA to unit commanders and training personnel. This can be accomplished through Eglin AFB Range Safety and Operations Procedures (RSOP) annual briefings, additional site-specific environmental briefings (i.e., BRSF and THSF), EAFBI 13-212, and/or through the Eglin AFB Center Scheduling Enterprise (CSE).
 - f. Track briefings, inspections, restrictions, and reports for regulators in accordance with current Eglin procedures.

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- g. Annually provide ground training units with global positioning system (GPS) coordinates for current protected species locations, including RCW trees, bald eagle nests, and wood stork roosting/feeding areas.
- h. Document and resolve any issues related to environmental compliance with the FFS upon notice of any compliance issues.
- Monitor conditions of high-use training areas, including the hardened camp sites, HLZs/DZ, and fixed-wing aircraft landing sites, to ensure areas are not overused (i.e., show signs of degradation or adverse impact) and do not expand beyond established boundaries.
- j. Survey proposed new training locations (including airstrips and HLZs) for protected/sensitive species, and survey existing training areas at least every 3 years to identify any new sensitive species that have moved into the area. As necessary, update associated operational constraints and GLI Protection Level maps.
- k. Prior to any activity that has the potential to create significant soil disturbance, complete a gopher tortoise survey. If a gopher tortoise burrow is found during the survey that cannot be avoided, then Eglin must obtain a gopher tortoise relocation permit from the FWC and conduct the relocation of the tortoise and any commensal species (i.e., indigo snake) in accordance with FWC protocols (described at http://myfwc.com/media/1410274/GTPermittingGuidelines.pdf) and the Eglin AFB Indigo Snake Programmatic Biological Opinion (USFWS, 2009c).
- Prior to any activity that has the potential to create significant soil disturbance, conduct a survey for federally listed plants. If listed plants cannot be avoided, additional consultation under the ESA is required.

Prior to any training activities, unit personnel will:

- Schedule training areas through Eglin AFB.
- 2. Acquire current RCW, eagle, and wood stork buffer locations from Eglin AFB and either load these into GPS devices or add to field maps.
- 3. Review GLI Protection Level maps and incorporate restricted areas into field maps as necessary, particularly for those areas not marked in the field (i.e., flatwoods salamander and piping plover critical habitat).
- 4. Once specific training areas and corridors are identified for the upcoming year, these areas must be surveyed for RCW cavity trees and bald eagle nests, and active trees must be marked. Coordinate with Eglin Natural Resources and the FFS to ensure that any necessary species surveys and markings are completed prior to ground operations.
- 5. Coordinate with Eglin AFB to schedule an in-briefing on environmental restrictions for unit commanders and training personnel prior to first time training at the emitter sites, BRSF and THSF; then at least annually thereafter.
- 6. Units must ensure environmental restrictions are communicated to all unit personnel that have a ground training requirement, including students, in verbal or written form prior to first time training on BRSF and THSF.
- 7. Route requests for land disturbing activities through Eglin AFB and the FFS for approval.

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During training activities, unit personnel will adhere to the following conservation measures. General

1. Units must follow the restrictions shown on GLI Protection Level maps (as defined in Table 2-3), and all applicable restrictions detailed in EAFBI 13-212. Electronic or hard copy maps showing these protected areas will be provided to units. These maps will be updated annually or more frequently if needed.

	Table 2-3. Sensitive Species Protection Levels for GLI Ground Operations					
Protection Level	Restrictions	Area Covered				
Prohibited	No access is permitted.	Piping plover critical habitat				
Restricted	All activities must remain on roadbeds of established roads, including troop movements, expendables use, vehicle operations, digging, and any type of ground surface disturbance. No refueling of vehicles or aircraft allowed.	1,500 feet around flatwoods salamander habitat: Sensitive species point locations and associated FNAI sensitive habitats: pitcher plant bogs; rare plants; rare animals				
RCW Buffer	Follow Management Guidelines for the Red-Cockaded Woodpecker on Army Installations (U.S. Army, 2007).	200 foot buffer around RCW cavity trees for ground operations; 500 ft buffer restricting aircraft operations and HLZs/LZs				
Bald Eagle Nests	During nesting season (October 1 to May 15), follow National Bald Eagle Management Guidelines (USFWS, 2007).	1000 ft buffer around nest for aircraft operations; 330 ft buffer for ground training operations				
Wood Stork Habitat	Follow Habitat Management Guidelines for the Wood Stork in the Southeast Region (USFWS, 1990).	500 ft buffer around wood stork feeding/roosting habitat				
Limited Use-1 (LU-1)	Approved Activities: use of star cluster pyrotechnics (hand-held slap flares) only for emergency purposes; use of non-lethal small arms ammunition such as blanks and paintballs (at BRSF approved for paintballs only). Dismounted maneuver and incidental and consumptive land disturbance. Nor Approved: use of smokes, flares, or simulators; off-road vehicle use – all vehicles must remain on established roads; land development and point land disturbance outside of previously disturbed roadbeds and road shoulders. LZ/DZ use except on approved FFS sites not requiring additional land development. No refueling of vehicles or aircraft allowed.	100 feet around wetlands, water bodies and floodplains; Areas exhibiting very limiting soil characteristics (e.g., susceptible to erosion) for HLZ and/or bivouacking				
Limited Use-2 (LU-2)	Approved Activities: use of pyrotechnics (e.g., smoke grenades and GBSs) and non-lethal small arms ammunition such as blanks and paintballs (at BRSF approved for smoke grenades and paintballs only, with GBSs permitted only at hardened camp sites). Dismounted maneuver. Incidental, point, and consumptive land disturbance (includes catholes) outside of previously disturbed roadbeds and road shoulders if approved by FFS. LZ/DZ use only on approved FFS sites with FFS coordination required for any additional land disturbance.	All areas not covered by other protection levels.				

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Protection Level	Restrictions	Area Covered
	Refueling of vehicles or aircraft allowed only on asphalt or concrete surfaces. Not Approved: off-road vehicle use – all vehicles must remain on established roads.	

BRSF = Blackwater River State Forest; DZ = drop zone; FFS = Florida Forest Service; FNAI = Florida Natural Areas Inventory; GBS = ground burst simulator; HLZ= helicopter landing zone; LU-1 = Limited Use-1; LU-2 = Limited Use-2; LZ = landing zone; RCW = red-cockaded woodpecker; USFWS = United States Fish and Wildlife Service

- 2. Follow restrictions in EAFBI 13-212.
- 3. Restrict training to only those tactical areas, landing/drop zones, and fixed-wing aircraft landing sites scheduled through Eglin AFB.
- 4. Follow Eglin and/or FFS spill prevention and spill response procedures. Immediate containment and spill response actions are required for petroleum, oil, and lubricant (POL) spills. Disposal/discharge of hazardous materials to the ground or in water is prohibited.
- 5. Check the fire danger rating daily for the state forest where training activities are to occur, and follow applicable restrictions.
- 6. If any federally or state-listed species is found dead or injured, immediately notify the GLI Liaison and Eglin AFB.
- 7. If an indigo snake, gopher tortoise, or black bear is sighted, allow the animal to leave the area undisturbed; notify the GLI Liaison and Eglin AFB.
- 8. Avoid gopher tortoise burrows by 25 feet, and mark burrow buffer as necessary in high traffic areas.
- 9. Do not cut down any trees, for any reason, and do not use sensitive vegetation (i.e., protected species) as part of natural resource consumption.
- 10. Follow guidance provided in the forest-specific environmental restrictions regarding approved plant and animal species for camouflage and consumption.
- 11. Follow Management Guidelines for the Red-Cockaded Woodpecker on Army Installations (U.S. Army, 2007) (Table 2-4), National Bald Eagle Management Guidelines (USFWS, 2007), and Habitat Management Guidelines for the Wood Stork in the Southeast (USFWS, 1990) during ground training activities and air operations.
- 12. Activities within 200 feet of identified RCW trees will not exceed two hours.
- 13. The GLI Liaison and Eglin AFB must be notified within 24 hours for the following occurrences:
 - a. RCW cavity tree is damaged (including wildfire damage) to the point it is unsuitable for nesting or roosting.
 - RCW cavity trees, cavity start trees or the surrounding soils are inadvertently damaged or disturbed during ground maneuvers.

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Table 2-4. GRASI LI Training Activities Allowed/Not Allowed Within 200 ft of RCW Cavity Tree

Mission Activity	Allowed	
Maneuver and Bivouac:		
Hasty defense, light infantry, hands and hand tool digging only, no deeper than 2 feet, 2 hours MAX	Yes	
Deliberate defense, light infantry		
Establish command post, light infantry		
Assembly area operations, light infantry	No	
Establish combat support/combat service support (CS/CSS) sites		
Establish signal sites		
Foot Transit through the Cluster	**	
Wheeled Vehicle Transit through the Cluster (1)	Yes	
Cutting Natural Camouflage, Hard Wood Only		
Establish Camouflage Netting	No	
Vehicle Maintenance for No More than 2 Hours	Yes	
Weapons Firing:		
7.62 mm and Below Blank Firing	Yes	
.50 cal Blank Firing		
All others	No	
Noise:		
Generators	No	
Pyrotechnics/Smoke:		
CS (2-chlorobenzalmalononitrile)/Riot Agents	No	
Smoke Grenades	Yes	
Incendiary Devices to Include Trip Flares		
Star Clusters/Parachute Flares		
Hexachloroethane (HC) Smoke of any Type	No	
Digging:		
Deliberate Individual Fighting Positions	No	

Source: U.S. Army, 2007; Table was modified to show only the activities that may occur as part of GRASI LI training.

Dismounted Maneuver

- 1. Follow restrictions identified in Table 2-3 and on the GLI Protection Level maps.
- 2. Do not enter Prohibited Areas: these are off-limits to all activities.
- 3. Avoid concentrated troop movements on steep slopes and in wetlands.
- 4. Do not step on, fill, or in any way cause a gopher tortoise burrow to collapse.

Land Disturbance

 Prior to any land disturbance (e.g., tree clearing for LOS), sensitive species surveys must be conducted, and any identified sensitive species and associated habitat must be avoided. If avoidance is not possible, then additional consultation under the ESA is likely to be required.

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^{1.} Vehicles will not get any closer than 50 feet of a marked cavity tree unless on existing roads, trails, or firebreaks.

^{2.} Smoke generators and smoke pots will not be set up within 200 feet of a marked cavity tree, but the smoke may drift through the 200-foot circle around a cavity tree.

- No land disturbance is permitted within 25 feet of gopher tortoise burrows. A gopher tortoise survey and relocation would be required if a burrow cannot be avoided (see requirements described in Conservation Measure "k" on page 2-13).
- 3. Point land disturbance is authorized only in Limited Use-2 areas.
- All digging must be approved through coordination with the GLI Liaison, FFS, and Eglin AFB prior to field activities.
- 5. For approved dig activities, units must fill in holes once training is complete and cover them with pine straw and leaves.

Mounted Maneuvers

- 1. Follow restrictions identified in Table 2-3 and on the GLI Protection Level maps.
- Fueling of vehicles is allowed only in Limited Use-2 areas (defined in Table 2-3) over asphalt or concrete. Follow Eglin and/or FFS spill prevention and spill response procedures.
- 3. Keep vehicles, including ATVs, on established roads at all times approved roadways and parking areas are designated by the GLI Liaison and FFS.
- 4. Use only the low water crossings that have been approved by the FFS and the GLI Liaison. Vehicle access will be prohibited at crossings rated in poor condition, and those on known Westfall's clubtail streams.
- 5. Prior to driving across a low water stream crossing, check for turtles and allow them to clear the crossing before use.
- 6. Do not enter Prohibited Areas: these are off-limits to all activities.
- 7. Avoid driving on roads with erosion issues; report any erosion issues to the GLI Liaison.
- 8. Prior to use on BRSF and THSF, and prior to use again at Eglin AFB, inspect all out-of-area equipment for invasive non-native species, and clean in accordance with Armed Forces Pest Management Board Technical Guide No. 31, Retrograde Washdowns: Cleaning and Inspection Procedures: http://www.afpmb.org/pubs/tims/tg31/tg31.pdf.

Bivouacking

- Campfires are not authorized except at hardened camp sites with prior approval through the GLI Liaison and Eglin AFB. The fire danger rating for each forest must be checked daily, and BRSF and THSF dispatch must be notified if any campfires are proposed. If any fires are approved, units must follow forest-specific restrictions as identified by the respective forest fire dispatch.
- 2. Minimize water consumption from rivers and streams.
- 3. Do not dam or divert water from streams or wetlands.
- 4. Do not use soap or other cleaners in streams or ponds.
- 5. Pack out trash. At no time will trash be buried or burned in a tactical area.

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- 6. Use chemical latrines for human waste disposal whenever possible during field training missions, and only in areas approved by the FFS When chemical latrines are not available, a cat-hole latrine or saddle trench latrine can be used in accordance with service command directives.
- 7. Hardstand and tent complex bivouacs are permitted only in previously cleared and disturbed areas around the perimeter of HLZs and DZs.

Expendable/Equipment Use

- 1. Follow restrictions identified in Table 2-3 and on the GLI Protection Level maps.
- 2. Live rounds are not authorized
- 3. Portable generators must be approved by the GLI Liaison, Eglin AFB and FFS, and used in accordance with each respective policy, including containment measures and spill kits. Generator use is prohibited within 200 feet of RCW trees.
- 4. Areas with concertina/barbed wire and trip wire must be manned, and units must remove all wire once training is complete.
- 5. Do not throw smokes, flares, or simulators directly into a water body.
- Avoid deposition of blank casings, marking cartridges, Chem-lites, and pyrotechnics debris into water.
- 7. Do not release chemicals or metals into streams, wetlands, or water bodies.
- 8. Do not release toxic aerosols within 300 feet of streams, wetlands, or water bodies.
- 9. Abandoning, dumping, burying or otherwise concealing munitions, pyrotechnics or residue from these items, including packing materials is prohibited.
- 10. Coordinate with the on-site FFS dispatch prior to initiation of field activities to check the fire danger rating daily for the forest where activities are to occur; follow all pertinent fire restrictions.
- 11. Conduct a fire check (visual observation) after the use of pyrotechnics or munitions has ceased; duration of the check will be dependent on the fire danger rating.
- 12. When a fire is started in a tactical area, the officer in charge will stop all training and concentrate on fighting the fire using all available personnel in accordance with guidance established in Chapter 6, Fire Fighting, of EAFBI 13-212.
- 13. Report wildfires immediately to the GLI Liaison, Eglin AFB and FFS Fire Dispatch.
- 14. Follow the Management Guidelines for the Red-Cockaded Woodpecker on Army Installations (U.S. Army, 2007) (Table 2-4).
- 15. Coordinate with the GLI Liaison and Eglin AFB to ensure the following Air Force Instruction (AFI) 32-7064 requirement is met: User groups responsible for wildfire starts are required to ensure that sufficient resources (i.e., fire management personnel and equipment) are available to respond to wildfires.

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Air Operations

- 1. Use only approved fixed-wing aircraft landing sites, HLZs, and DZs.
- 2. Incorporate restrictions from Table 2-3 and the GLI Protection Level maps (i.e., no air operations within 500 ft of RCW trees, 500 ft of wood stork feeding/roosting habitat, or 1,000ft of eagle nests) into flight plans.
- 3. Notify GLI Liaison and Eglin AFB of any landing zone that shows signs of overuse.
- Fueling of aircraft is allowed only in Limited Use-2 areas (defined in Table 2-3) over asphalt or concrete. Follow Eglin and/or FFS spill prevention and spill response procedures.
- 5. Coordinate through the GLI Liaison and Eglin AFB the need for any land clearing or improvements for a landing zone.
- 6. Suspend CV-22 landings at grassy sites on days with a high fire danger rating.

Amphibious Operations

- 1. Use only those boat landing sites designated by the GLI Liaison, through coordination with the FFS. To the extent possible, boat landings should occur on established, hardened boat ramps for ingress/egress of amphibious craft, particularly on the Yellow and Ochlocknee rivers and Apalachicola and East bays. If ingress/egress must utilize natural habitat in wetlands, care should be taken to prevent destruction of wetland vegetation or other activities that might cause shoreline erosion. Ingress/egress points at non-hardened locations for both personnel and watercraft should be rotated to the extent possible to allow sites time to recover from amphibious operations.
- 2. Avoid contact of boat propellers with submerged vegetation (i.e., seagrass beds).
- 3. Notify the GLI Liaison and Eglin AFB of any shoreline/bank areas that show signs of overuse.
- 4. Keep boats clean to prevent introduction of invasive or nonnative species from other aquatic environments. Boats from out-of-town units must be verified clean before using them in local rivers, creeks and estuaries.

After field training activities, unit personnel will:

- 1. Police training areas to ensure that no trash, ammunition boxes, wire, munitions cartridges, or other debris has been left in the area and all excavations are filled.
- 2. Coordinate with the GLI Liaison and Eglin AFB on site surveys to detect environmental impacts by providing requested information.
- 3. Coordinate with the GLI Liaison and Eglin AFB to correct or repair environmental impacts caused by training activities
- Report excessive damage to roads, vegetation, or training assets (i.e., HLZs, boat landing sites) to the GLI Liaison and Eglin AFB. Damage must be assessed and necessary corrective measures taken.

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3. BIOLOGICAL INFORMATION

The sixteen federally listed species on or adjacent to BRSF and THSF listed in Table 3-1 were considered for this action, and are described in Section 2.3. The following additional species were also considered: gopher tortoise, bald eagle, and several plant and animal species which are on the Petitioned list for the USFWS (Section 3.2). Multiple state listed species also occur on these forests, and are discussed generally in Section 3.2.

Table 3-1. Federally Listed Species Within or Adjacent to the Proposed Action Areas

Common Name	Scientific Name	Federal Status	Location
Red-cockaded woodpecker	Picoides borealis	Endangered	BRSF, THSF
Wood stork	Mycteria americana	Endangered	THSF
Reticulated flatwoods salamander*	Ambystoma bishopi	Endangered	BRSF
Frosted flatwoods salamander*	Ambystoma cingulatum	Threatened	THSF
Eastern indigo snake	Drymarchon couperi	Threatened	BRSF, THSF
Piping plover*	Charadrius melodus	Threatened	THSF
Gulf sturgeon*	Acipenser oxyrinchus desotoi	Threatened	BRSF. THSF
Purple bankclimber*	Elliptoideus sloatianus	Threatened	THSF
Choctaw bean*	Villosa choctawensis	Endangered	BRSF
Narrow pigtoe*	Fusconaìa escambia	Threatened	BRSF
Southern sandshell*	Hamiota australis	Threatened	BRSF
Fuzzy pigtoe*	Pleurobema strodeanum	Threatened	BRSF
Godfrey's butterwort	Pinguicula ionantha	Threatened	THSF
Florida skullcap	Scutellaria floridana	Threatened	THSF
White birds-in-a-nest	Machridea alha	Threatened	THSF
Telephus spurge	Euphorbia telephioides	Threatened	THSF

^{*}Critical habitat for this species is also present on or adjacent to the state forests.

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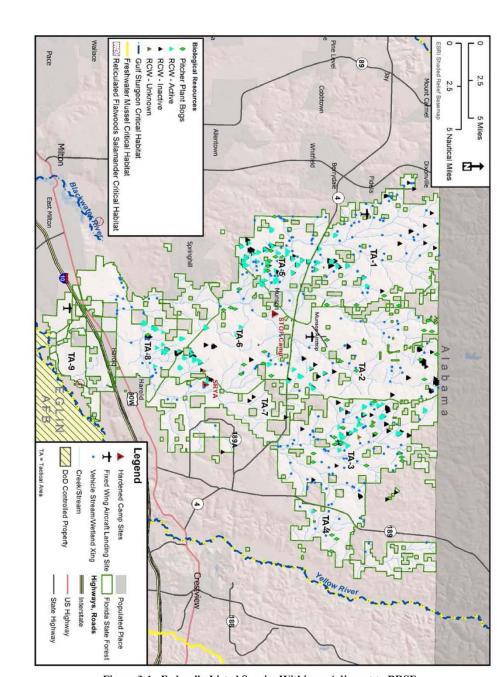
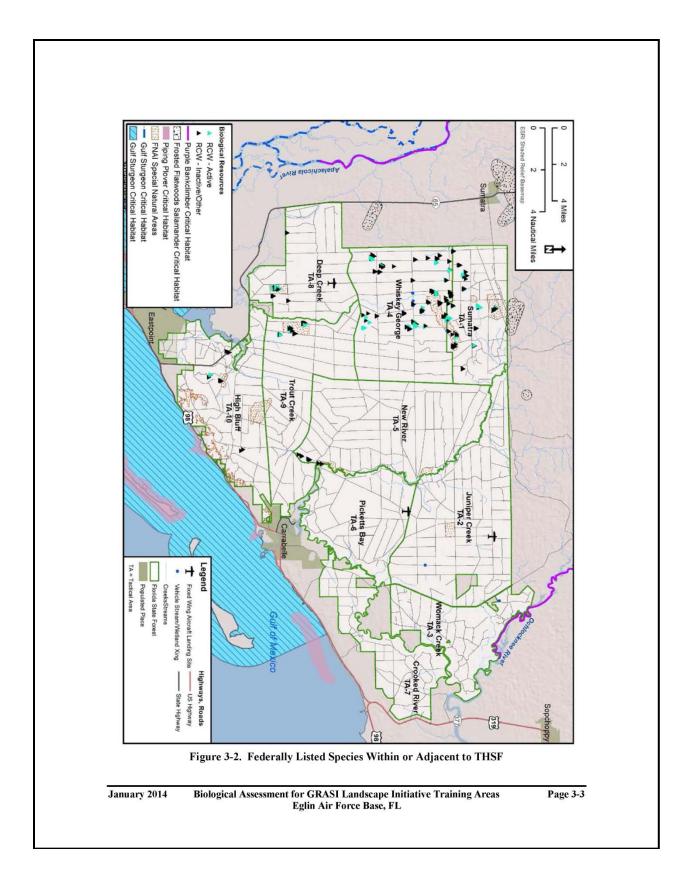


Figure 3-1. Federally Listed Species Within or Adjacent to BRSF

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3.1 FEDERALLY LISTED SPECIES

3.1.1 Red-cockaded Woodpecker

The red-cockaded woodpecker (RCW) (*Picoides borealis*) is listed as a federal and state endangered bird species. The RCW historically had a habitat range as far north as New Jersey and as far west as Oklahoma. Today, the RCW is restricted to the southeastern United States, from Florida to Virginia and to southeast Texas, due to habitat loss. Habitat loss and fragmentation is the greatest threat to RCW populations. RCWs occur in a variety of pine species ecosystems. In Florida, RCWs inhabit slash, longleaf, and loblolly pines.

This species does not migrate, maintaining year-round territories near its nesting and roosting trees (USFWS, 2008), which are termed *clusters*. An RCW cluster typically encompasses about 10 acres with most cavity trees likely within a 1,500-foot diameter circle. The woodpeckers primarily feed on spiders, ants, cockroaches, centipedes, and insect eggs and larvae that are excavated from trees. Dead, dying, and lightning-damaged trees that are infested with insects are a preferred feeding source. The birds also feed on the fruits of black cherry, southern bayberry, and black tupelo. Within the area of GLI activities, the RCW excavates cavities in live pine trees that are typically at least 85 years old. In the Southeast, 98 percent of the longleaf pine forests have been removed, making relatively undeveloped state and federal lands primary habitat for the species.

High-quality RCW forage habitat consists of open pine stands with tree diameter at breast height (dbh) averaging 10 inches and larger. While 100 acres of mature pine is sufficient for some groups, birds commonly forage over several hundred acres where habitat conditions are not ideal (Jackson et al., 1979). In systems with medium to high productivity, only 120 acres may be needed, whereas at sites with low productivity 200 to 300 acres of foraging habitat may be required (USFWS, 2003). General population recommendations for good quality foraging habitat include 18 or more stems per acre that are greater than 60 years in age and greater than 14 in dbh. Another requirement for good quality habitat is that it contains forbs and bunchgrasses in the understory, and has sparse or no hardwood midstory.

Consultation guidelines require that military training within 200 feet of marked cavity trees be limited to military activities of a transient nature (less than two hours occupation), and military vehicles are prohibited from occupying a position or traversing within 50 feet of a marked cavity tree, unless on an existing road or maintained trail or firebreak. Prohibited activities within the 200-foot buffer include bivouacking, excavating, digging, and establishing command posts. In addition, if timber is to be removed within 0.5 mile of active cavity trees, then a foraging habitat analysis must be completed to determine potential impacts. Consultation is required if resulting resources fall below USFWS guidelines.

BRSF

BRSF is adjacent to Eglin AFB and Conecuh National Forest, which together provide a large tract of suitable RCW habitat. The RCW population on BRSF is part of the Blackwater/Conecuh

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secondary core population of the East Gulf Coastal Plain Recovery Unit (USFWS, 2003). The combined minimum number of PBGs for this core population at the time of delisting is 250. In addition, the goal at delisting is 309 and 45 active clusters in Conecuh National Forest and BRSF, respectively.

RCWs occur throughout the BRSF, but clusters are concentrated in three general areas (Figure 3-1) (Langston, 2013). The number of Potential Breeding Groups (PBGs) and clusters has been steadily increasing since the late 1990s, and there are currently over 90 PBGs and 94 active clusters in the BRSF (FDACS and FFS, 2013).

RCW recovery activities being implemented at BRSF include monitoring, artificial cavity installation, burning and mowing, and bird translocations. The average fire return interval is 2-3 years in RCW areas. RCW cavity trees are prepared prior to prescribed fires by cutting brush down around the tree and raking away the litter. Post-wildfire inspections include checks with a peeper scope and evaluation of whether tree damage has occurred. If a damaged or dead tree is identified, then BRSF typically will install a replacement cavity in a nearby tree; currently the forest installs approximately 10 replacement cavities annually. Known active and inactive clusters are monitored annually; however, a comprehensive survey program has not been established for BRSF to help systematically survey for new trees or clusters.

THSF

THSF is part of a large contiguous tract of managed forested area extending from the Apalachicola River to near Tallahassee, which supports a total of approximately 638 RCW clusters (NAS, 2013). THSF is part of the Central Florida Panhandle primary core population of the East Gulf Coastal Plain Recovery Unit (USFWS, 2003). Other managed areas supporting this core population include the Apalachicola National Forest, Ochlockonee River State Park, and St. Mark's National Wildlife Refuge. The combined minimum number of PBGs for the Central Florida Panhandle population at the time of delisting is 1,000. The goal is 400 active clusters in THSF.

During annual RCW cluster monitoring, biologists visit all known trees to determine status (active, inactive, dead), and to record cavity trees that have been damaged or killed by fire. In 2009, checks identified 102 active trees within 26 active clusters (Figure 3-2). The number of active clusters continues to increase steadily, with 37 active clusters including 112 active trees as of 2012 (FDACS, 2012). THSF personnel survey approximately 20% of the forest each year for new RCW trees. It is necessary to survey some portions of THSF by helicopter (December to January) due to the remoteness and difficulty with reaching those areas.

RCW-related management activities include mechanical hardwood control, longleaf pine plantings, prescribed fire, bird monitoring, and use of artificial cavities to create recruitment clusters or to supplement existing clusters. THSF supplements clusters with artificial cavities (drilled cavities and insert boxes) when a cluster has fewer than four useable cavities. RCW habitat is prioritized for prescribed burning, with a current fire return interval of approximately every three to five years. As dense, mature pine is thinned, fuel loads and hardwood encroachment are reduced, THSF is moving towards burning these areas every one to three years, including growing season burns. In advance of prescribed burns, THSF prepares RCW

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trees by clearing brush around the trees and applying Firelce (water-enhancing gel) to the trunks of the trees. During burns, biologist rangers are present to check burn progress in the vicinity of RCW trees. THSF checks RCW cavity trees for damage during post-burn and wildfire evaluations.

3.1.2 Wood Stork

The wood stork (Mycteria americana) is a large wading bird federally and state listed as endangered; the continental breeding population of the wood stork is currently proposed for reclassification from endangered to threatened. Nesting occurs in peninsular and north-central/northeastern Florida, but the western Panhandle does not appear to be a primary area for nesting colonies (USFWS, 2013c). The wood stork does not presently nest on THSF and is considered to only have potential occurrence at the forest. Wood storks feed on small to medium-sized fish, crayfish, amphibians, and reptiles by moving their partially opened bill through water, snapping up prey when the prey comes in contact with the bill (FWC, 2013b). They forage in a variety of wetlands including freshwater and estuarine marshes. Preferred foraging habitats include salt marsh, tidal creeks, mudflats, and small, shallow sloughs that are tributaries to larger tidal creeks. Primary threats to the wood stork include loss of feeding habitat, human manipulation of water levels at nesting sites, predation, and lack of nest tree regeneration.

3.1.3 Reticulated Flatwoods Salamander and Critical Habitat

The reticulated flatwoods salamander (Ambystoma bishopi) is state and federally listed as endangered. Based on molecular and morphological analyses, the flatwoods salamander has been separated into two species. The division lies along the Apalachicola-Flint Rivers with reticulated flatwoods salamanders inhabiting areas to the west and frosted flatwoods salamanders (A. cingulatum, federally threatened) ranging to the east of the rivers.

Optimal habitat for this small mole salamander is open, mesic (moderately wet) woodlands of longleaf or slash pine flatwoods maintained by frequent fires and that contain shallow, ephemeral wetland ponds. Males and females migrate to these ephemeral ponds during the cool, rainy months of October through December. The females lay their eggs in vegetation at the edges of the ponds. Flatwoods salamanders may disperse long distances from breeding sites to upland sites where they live as adults.

The primary threat to the flatwoods salamander is loss of mesic habitat through the filling in of wetlands and other alterations to the landscape hydrology. Flatwoods salamander habitat is also threatened by the introduction of invasive, non-native species. USFWS guidelines in the Federal Register, dated 1 April 1999, establish a 450-meter (1,476-foot) buffer area from the wetland edge of confirmed breeding ponds. Within the buffer area, the guidelines restrict ground-disturbing activities in order to minimize the potential for direct impacts to salamanders, the introduction and spread of invasive non-native plant species, and alterations to hydrology and water quality. These restrictions also apply to the frosted flatwoods salamander (described below).

Critical habitat has been designated for the reticulated flatwoods salamander on a portion of TA-9 in BRSF (Unit RFS-2 Subunit) (Federal Register, 2009), but the salamander has not been

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recently found here by biologists (FDACS and FFS, 2013). The Northwest Florida Water Management District and BRSF share management of a single salamander population within the Subunit, which encompasses 162 acres in Santa Rosa County, Florida (Figure 3-1). Within the unit, there are 32 acres on State land managed by the Water Management District and 130 acres on State land managed by BRSF. This subunit is located south of Interstate 10 and near the Santa Rosa-Okaloosa County border. A road bisects the unit and a power line crosses the eastern edge of the breeding pond. Threats to the reticulated flatwoods salamander and its habitat that may require special management of the primary constituent elements include the potential fire suppression, alterations in forestry practices that could destroy the below-ground soil structure, and hydrologic changes resulting from the road and power line that could alter the ecology of the breeding pond and surrounding terrestrial habitat. In addition, run-off from highways may introduce toxic chemicals into breeding sites.

3.1.4 Frosted Flatwoods Salamander and Critical Habitat

The federally threatened frosted flatwoods salamander (*Ambystoma cingulatum*), similar in appearance to the reticulated flatwoods salamander, occurs in slash and longleaf pine flatwoods that have a wiregrass floor and scattered wetlands. Distribution is east of the Apalachicola River in Franklin, Wakulla, Liberty, Jefferson, and Baker counties. Habitat requirements and breeding behaviors are similar to those described previously for the reticulated flatwoods salamander. The same 450-meter protection buffer also applies for the frosted flatwoods salamander.

There are currently no known ponds on THSF with flatwoods salamanders. Though there are several records of larvae and adult salamanders (1984, 1985, and 1998), more recent surveys have not detected any (2000-2001 drift fence arrays and 2002, 2003, and 2004 dip net surveys). Salamander movement and breeding activity, however, is highly dependent upon weather patterns and several of these surveys were impacted by drought. The small area along the northern boundary of the Sumatra TA-1 tract is considered critical habitat by the USFWS (Figure 3-2); ponds to the north of THSF on Apalachicola National Forest were occupied by flatwoods salamanders as of 2009 and this area of THSF is within the buffer around those ponds. The ponds are part of Unit FFS-1, Subunit A, which is located in Liberty County. Much of the land in this Subunit is owned by the federal government and is likely protected from direct agricultural and urban development. However, the habitat may require special management of the primary constituent elements to address potential threats such as fire suppression, alteration of forestry practices that could destroy the soil structure, and hydrologic changes resulting from adjacent highways and roads that could alter the ecology of the breeding pond and surrounding terrestrial habitat. When potential flatwoods salamander habitat occurs within forest operational areas, buffers will be used to limit further disturbance. The FWC biologist is in the process of identifying ephemeral ponds and other features typical to salamander habitat, though no ponds on THSF are currently known to be occupied. Dip-net surveys will be conducted again in 2014.

3.1.5 Eastern Indigo Snake

The eastern indigo snake (Drymarchon couperi) is listed as a federal and state threatened species, and is the largest non-venomous snake in North America. The primary reason for its listing is population decline resulting from habitat loss and fragmentation. Movement along travel corridors between seasonal habitats exposes the snake to danger from increased contact with humans. Indigo snakes frequently utilize gopher tortoise burrows and the burrows of other

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species for over-wintering. The snake frequents flatwoods, hammocks, stream bottoms, riparian thickets, and high ground with well-drained, sandy soils.

It is difficult to determine a precise number or even an estimate of the number of these snakes due to the secretive nature of this species. Habitat for this species seems to be good within BRSF; however, the eastern indigo snake has not been found on BRSF for many years (FDACS and FFS, 2013). Occurrence is unknown within THSF, although the *THSF Resource Management Plan* lists the indigo snake as a species potentially inhabiting the area (FDACS, 2007).

3.1.6 Gulf Sturgeon and Critical Habitat

The Gulf sturgeon (Acipenser oxyrinchus desotoi) is an anadromous fish with a federal and state status of threatened. This large fish occurs predominately in the northeastern Gulf of Mexico, where it ranges from the Mississippi Delta east to the Suwannee River in Florida. The Gulf sturgeon feeds in offshore areas and inland bays during the winter months and moves into freshwater rivers during the spring to spawn. Migration into fresh water generally occurs from March to May, with spawning taking place during April through June. Migration into salt water begins in late October to early November.

In the Final Rule for the designation of critical habitat, seven primary constituent elements are identified (Federal Register, 2003):

- Abundant food items within riverine habitats for larval and juvenile life stages, and within estuarine and marine habitats for adult and subadult life stages.
- Riverine spawning sites with suitable substrate.
- Riverine aggregation areas (resting, holding, or staging areas).
- Proper stream flow regime for all life stages.
- Adequate water quality for all life stages.
- Adequate sediment quality for all life stages.
- Safe and unobstructed migratory pathways for passage within and between riverine, estuarine, and marine habitats.

Critical habitat units for the Gulf sturgeon collectively encompass almost 2,800 river kilometers and over 6,000 square kilometers of estuarine and marine habitat. In the region of GLI activities, critical habitat is delineated for the 1) Yellow River and its distributaries, 2) Blackwater River downstream from its confluence with Big Coldwater Creek, 3) Apalachicola River and its distributaries, 4) Apalachicola Bay and its adjoining bays, sounds, and nearshore waters of the Gulf of Mexico, and 5) the Gulf of Mexico from the Mean High Water line to 1 nautical mile offshore (Figure 3-1 and Figure 3-2).

3.1.7 Piping Plover and Critical Habitat

The piping plover (Charadrius melodus) is a federally and state threatened bird. Non-breeding (migration and wintering) piping plover season along the Gulf Coast is

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15 July through 15 May. Piping plovers migrate to northern areas to breed. In Gulf Coast areas, piping plovers are known to forage for invertebrates in exposed wet sand such as wash zones, intertidal ocean beachfronts, wrack lines, washover passes, mud and sand flats, ephemeral ponds, and salt marshes. They are also known to use adjacent areas for sheltering in dunes, debris, and sparse vegetation. Studies have shown that non-breeding plovers spend 76 percent of their time foraging for invertebrates found just below the surface of wet sand (U.S. Air Force, 2013). Piping plovers are commonly documented during winter in the Florida panhandle with highest numbers of birds occurring in Franklin, Gulf, and Bay counties.

Piping plover critical habitat generally includes land from the Mean Lower Low Water (MLLW) line to where densely vegetated habitat, not used by the piping plover, begins and where the constituent elements no longer occur (Federal Register, 2001). At THSF, critical habitat for the wintering piping plover is present in FL-10 Unit, Yent Bayou, most of which is adjacent to the area known as Royal Bluff (Figure 3-2). The unit includes the St. George shoreline between 3.7 miles and 5.9 miles east of State Road 65, and encompasses the area from MLLW to where the constituent elements are no longer present (i.e., developed structures, roads, or densely vegetated habitat). The area is not posted because this portion of THSF is not easily accessible and there is little human traffic.

3.1.8 Purple Bankclimber and Critical Habitat

The purple bankclimber (*Elliptoideus sloatiamus*) is a large freshwater mussel federally and state listed as threatened. This species occurs in rivers of the central Florida Panhandle and southwestern Georgia with slow to moderate current and sand, fine gravel, or muddy sand substrate (FWC, 2013a; NatureServe, 2013). Little is known of this mussel's life history. As a filter feeder, diet consists primarily of plankton and detritus. Larvae are released into the water and attach to the gills or fins of host fish, where they develop and then release to settle on the substrate. Mosquito fish, black-banded darter, and the guppy are thought to be host fish (NatureServe, 2013). The primary threat to the purple bankclimber is waterway impoundment, which may result in sedimentation due to decreased water velocity. Impoundment may also cause habitat fragmentation, potentially leading to a lack of or diminished numbers of host fish. Other threats include river dredging, competition with invasive species, and pesticide and chemical pollution.

Critical habitat has been designated for the purple bankclimber in portions of the Apalachicola and Ochlocknee Rivers (USFWS, 2007a) (Figure 3-2). Portions of the Lower Ochlockonee River segment occur adjacent to THSF. This segment consists of the main channel from its confluence with Syfrett Creek in Wakulla County, Florida, upstream to the Jackson Bluff Dam in Leon and Liberty Counties. The primary constituent elements used to define critical habitat, and which are present in each river or river segment, include 1) a geographically stable stream channel, 2) predominantly sand/gravel/cobble substrate with low to moderate amounts of silt and clay, 3) permanently flowing water, 4) adequate water quality, and 5) presence of host fish.

3.1.9 Choctaw Bean, Narrow Pigtoe, Southern Sandshell, Fuzzy Pigtoe and Critical Habitat

The Choctaw bean (Villosa choctawensis), narrow pigtoe (Fusconaia escambia), southern sandshell (Hamiota australis), and fuzzy pigtoe (Pleurobema strodeanum) are freshwater mussel

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species that are listed as endangered (Choctaw bean) or threatened (remaining species) under the ESA (Federal Register, 2012). As filter feeders, these species live as adults embedded in the bottom of water bodies, collecting and ingesting detritus, algae, and bacteria. Juveniles burrow completely into the substrate and collect food with the extended foot. Like the purple bankclimber, larvae are released into the water and attach to the gills, fins, or skin of host fish, where they develop and then release. These mussels are endemic to three Coastal Plain rivers – Escambia/Conecuh, Yellow, and Choctawhatchee Rivers, thus may occur at BRSF (Figure 3-1).

The Choctaw bean occurs in all three river drainages. The species is generally found in medium creeks to medium rivers in stable substrates of silty sand to sandy clay with moderate current. This mussel persists in most of its historic range. However, it has experienced localized extirpations and population numbers are low, particularly in the Escambia and Yellow River drainages. For example, a total of only 14 and 15 individuals have been collected in Escambia and Yellow River drainages, respectively, since 1995.

The narrow pigtoe is known from the Escambia and Yellow River drainages in Florida. The species is found in medium creeks to medium rivers, in stable substrates of sand, sand and gravel, or silty sand, with slow to moderate current. It occurs in nearly all its historical range of the Escambia River drainage, but is rare in the Yellow River drainage.

The southern sandshell is known from the Escambia River drainage in Alabama, and the Yellow and Choctawhatchee River drainages in Alabama and Florida. This species is typically found in small creeks and rivers in stable substrates of sand or mixtures of sand and fine gravel, with slow to moderate current. The southern sandshell persists throughout its historic range; however, the range is fragmented and numbers appear to be declining.

The fuzzy pigtoe is endemic to the Escambia, Yellow, and Choctawhatchee River drainages. The species is found in medium creeks to medium rivers in stable substrates of sand and silty sand with slow to moderate current. Present occurrence in the Escambia River drainage is uncertain. It is considered exceedingly rare in the Yellow River drainage, where only a single individual has been collected from the main channel in Florida in recent years. The fuzzy pigtoe occurs in nearly all its historic range of the Choctawhatchee River drainage, although it has become extirpated in localized areas.

Like other freshwater mussels, the primary threat to these species is habitat modification and destruction, particularly sedimentation, dam placement, and water quality degradation. Critical habitat has been designated for these four species, and consists of nine units within the various river drainages. Designated critical habitat includes the creek and river channels within the ordinary high-water line, which is considered to be the line on the shore established by water fluctuations. Critical habitat for the four species described above occurs in the Yellow River system along the border of BRSF (Figure 3-1).

3.1.10 Godfrey's Butterwort

Godfrey's butterwort (*Pinguicula ionantha*) is a carnivorous plant species federally listed as threatened and state listed as endangered. This species is only known to occur in six counties of the Florida Panhandle, including Franklin and Liberty Counties (USFWS, 2013). Typical habitat

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includes open, acidic soils of seepage bogs on gentle slopes, deep quagmire bogs, ditches, and depressions in grassy pine flatwoods and grassy savannas (NatureServe, 2013a). The species often occurs in shallow standing water and some leaves may be submerged. Occurrence has also historically been noted along road right-of-ways. Primary threats include fire suppression and habitat alteration. Fire suppression may result in increased growth of shrubs and saplings in the understory, which inhibits the butterwort. Eleven populations were previously reported in THSF (Figure 3-3); however, only four populations were found during a survey in 2009 (USFWS, 2009).

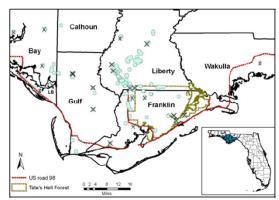


Figure 3-3. Godfrey's Butterwort Documented Occurrences Source: USFWS, 2009; X = not found during recent surveys

3.1.11 Florida Skullcap

The Florida skullcap (*Scutellaria floridana*) is a perennial plant species federally listed as threatened and state listed as endangered. The skullcap is known from only four counties of the Florida Panhandle, including Franklin and Liberty Counties (USFWS, 2013a). This species typically occurs in poorly drained coastal pinelands with frequent fire (U.S. Forest Service, 2010). Habitat generally includes grassy wet flatwoods, wet prairies, and savannas; palustrine habitats consist of various wetland types (forested, herbaceous, and scrub-shrub) (NatureServe, 2013b; FNAI, 2010). Three known populations have been documented in the western portion of THSF, with other populations near the northern border (Figure 3-4) (USFWS, 2009a); one of the three populations was not found during a 2008 survey. The missing population occurred in an area historically fire suppressed and disturbed by feral hogs. Fire suppression is one of the primary threats to this plant. Frequent fire stimulates the emergence of individuals and maintains stable populations.

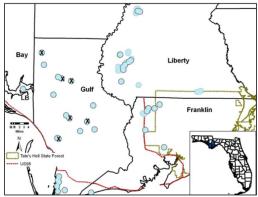


Figure 3-4. Florida Skullcap Documented Occurrences Source: USFWS, 2009a; X = not found during recent surveys

3.1.12 White Birds-in-a-nest

The white birds-in-a-nest (*Macbridea alba*) is a plant species federally listed as threatened and state listed as endangered. This species is restricted to four counties of the Florida Panhandle, including Franklin and Liberty Counties (USFWS, 2013b). Occurrence is typically in grassy areas of poorly drained soil; the wettest sites are grassy seepage bogs on gentle slopes at the edges of forested or shrubby wetlands (Federal Register, 1990). Less permanently wet sites include savannas and wet prairies. The species may occasionally be found on drier sites with longleaf pines and oaks (NatureServe, 2013c). White birds-in-a-nest require fire to maintain healthy populations. This species is found near the eastern and western borders of THSF (Figure 3-5). Six populations were previously documented at THSF (USFWS, 2009b). About 21 plants were recorded at 3 of these sites during surveys in 2008; of the two remaining sites, one was not found and one did not contain the species.

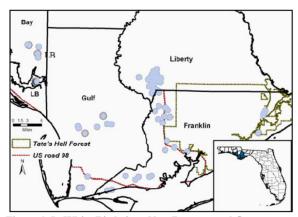


Figure 3-5. White Birds-in-a-Nest Documented Occurrences Source: USFWS, 2009b

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3.1.13 Telephus Spurge

Telephus spurge (*Euphorbia telephioides*) is a federally threatened plant species that is known from only three Florida counties (Bay, Franklin, and Gulf). Habitat generally consists of 1) longleaf and slash pine savanna/flatwoods with ground cover dominated by wiregrass, and 2) low, sandy rises dominated by pine/scrub oak near the coast (NatureServe, 2013f). Historically documented populations are shown in the 5-year review of this species (USFWS, 2008a). In Franklin County, two of these populations (numbers 26 and 35) are depicted near THSF (Figure 3-6). However, no specimens were found at either of these sites during a 2007 survey and the review document states that both populations may be extirpated. Nevertheless, the USFWS considers this species to have potential occurrence in THSF.

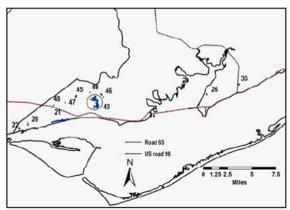


Figure 3-6. Telephus Spurge Documented Occurrences Source: USFWS, 2008a

3.2 OTHER SPECIES CONSIDERED

3.2.1 Gopher Tortoise

The gopher tortoise (*Gopherus polyphemus*) is a state threatened species, and a federal candidate species, that is found on both BRSF and THSF. A Federal Register (2011a) notice documented the 12-month finding on a petition to list the gopher tortoise as threatened in the eastern portion of its range (east of the Mobile and Tombigbee Rivers). The review found that the listing of the gopher tortoise is warranted; however, listing is currently precluded by higher priority actions. The gopher tortoise is currently classified as a Candidate species, and a proposed rule to list the gopher tortoise will be developed as priorities allow. In December 2008, all Department of Defense entities, as well as state agencies and other non-governmental organizations, signed a Candidate Conservation Agreement with the USFWS. This agreement defines what each agency will voluntarily do to conserve the gopher tortoise and its habitat.

In the GLI region, the gopher tortoise is found primarily in longleaf pine and oak uplands (sandhills) and open grassland ecological associations, where it excavates a tunnel-like burrow

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for shelter from climatic extremes and refuge from predators. The primary features of good tortoise habitat are well-drained sandy soils, open canopy with plenty of sunlight, and abundant food plants (forbs and grasses). Prescribed fire is often employed to maintain these conditions. Nesting occurs during May and June and hatching occurs from August through September. Gopher tortoise burrows serve as important habitat for many species, including the federally listed eastern indigo snake.

3.2.2 Federally Petitioned Species

In 2011, the USFWS announced a finding on a petition to list over 400 plant and animal species occurring in the southeastern U.S. as endangered or threatened under the ESA (USFWS, 2011). The Service found that there is substantial scientific or commercial information indicating that listing may be warranted for 374 of the species. Therefore, a status review of these species is currently in progress. Five of the animal species and eight of the plant species for which listing is considered warranted have potential occurrence in BRSF or THSF (Table 3-2 and Table 3-3).

Table 3-2. Federally Petitioned Animal Species at THSF and BRSF

Common Name	Scientific Name	Classification	BRSF	THSF
Westfall's clubtail	Gomphus westfalli	Insect	X	
One-toed amphiuma	Amphiuma pholeter	Amphibian	X	X
Barbour's map turtle	Graptemys barbouri	Reptile		X
Escambia map turtle	Graptemys ernsti	Reptile	X	
Florida red-bellied turtle	Pseudemys nelsoni pop. 1	Reptile		X

The Westfall's clubtail is a dragonfly species that has an extremely small known range of about 25 kilometers diameter in the Florida Panhandle, and has been documented only within a few streams on BRSF in Santa Rosa County (NatureServe, 2013d). Larval habitat for this species generally consists of boggy streams and seepages, where larvae burrow in silt. Adults forage in open forest near ground level, with an estimated range of approximately 500 meters in a radius around the breeding site (NatureServe, 2013d).

The one-toed amphiuma is a salamander that occurs only within about 80 to 120 kilometers inland from the southeastern Gulf coast (NatureServe, 2013g). This species has potential occurrence within BRSF and THSF. Habitat consists of riparian areas and various wetland types (forested, scrub-shrub, floodplain swamp). Alluvial forest, which consists of hardwood forest on low levees, ridges and terraces within the floodplains of streams and rivers, constitutes known habitat for this species (FNAI, 2009).

Barbour's map turtle occurs primarily in the Apalachicola River system, including Franklin County, Florida (NatureServe, 2013h), and may occur at THSF. Although this species has not been recorded at THSF, surveys for this species will continue in the spring of 2014. This species may be found in wetland, riparian, and sandy areas. Habitat includes alluvial and spring-fed rivers and associated waters (river swamps, impoundments, etc.), as well as clear limestone-bottomed streams with an abundance of fallen trees and mollusks. This turtle is often found basking on logs. It is inactive at night and may be found on submerged limbs just beneath the water surface. During cold weather, it often rests on the bottom in limestone depressions. Eggs are buried in sand at the water's edge. Adult males and juveniles feed mostly on insects, while adult females feed primarily on mussels and snails.

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The Escambia map turtle occurs in several river drainages of northwest Florida and Alabama, including the Yellow and Shoal Rivers (NatureServe, 2013i), and may occur in BRSF. This species may be found in riparian and sandy areas. Habitat includes rivers with alluvial characteristics more prominent than blackwater characteristics. This turtle is frequently found in small streams but reaches greater abundance in large rivers with abundant basking and nesting sites (beaches with fine sands). The species is absent from rivers that lack freshwater mollusks (e.g., Blackwater River, Florida). It avoids salt water and is therefore rarely found within one mile of a river mouth. Diet is similar to the Barbour's map turtle.

The Florida red-bellied turtle (population 1 – Florida Panhandle) is apparently limited to the lower Apalachicola/Chipola River drainage and associated delta and offshore islands (NatureServe, 2013j). This population is disjunct from the main population in peninsular Florida. This species has been recorded in Franklin County, although none have been found in THSF. Habitat consists of ponds, lakes, and sluggish portions of rivers. Nesting occurs in adjacent upland habitat, typically in sunny locations, and potentially in alligator nests. This species often burrows in the soil.

Table 3-3 lists the petitioned plant species that occur at BRSF and THSF, and includes summary habitat descriptions.

Table 3-3. Federally Petitioned Plant Species at BRSF and THSF

Common Name	Scientific Name	Locations	Habitat*
West's flax	Linum westii	THSF	Shallow pond margins in slash pine-saw palmetto flatwoods,
			bogs, cypress pond margins, and ditches. Depression
			marshes, dome swamps, wet flatwoods, and wet prairies.
Curtiss'	Lythrum curtissii	THSF	Silts, fine sands, or peat mucks of bogs, seeps, and clearings
loosestrife			found in or on edges of acid or calcareous swamps, karst
			ponds, creek swamps, floodplains, and stream banks.
Bear tupelo	Nyssa ursina	THSF	Open bogs, wet flatwoods, and swamps, often with titi.
Small-flower	Rhexia	BRSF;	Margins of ponds and shallow depressions associated with
meadow-beauty	parviflora	THSF	pine-palmetto flatwoods and savannas. Found on seepage
			slopes and margins of dome swamps, depression marshes,
			and evergreen shrub ponds. Soils are usually sands with high
			peat content.
Henry's spider-	Hymenocallis	THSF	Occurs within the narrow ecotone between dome swamps
lily	henryae		and mesic/wet flatwoods, or within the ecotone between
			dome swamps and wet prairies.
Panhandle lily	Lilium iridollae	BRSF	Baygalls, wet flatwoods, seepage slopes, and the edges of
			bottomland forests, typically in sandy peat or loamy soils
			which are saturated for at least part of the year. The sites
			have open to full sun or filtered light. Occasional fire is
			advantageous to this species.
Gulf sweet	Sarracenia rubra	BRSF	Sandy-muck spring-head bogs, often bordering small ponds
pitcher plant	sp. gulfensis		or slow meandering creeks and rivers. The most robust plants
			grow in areas not subject to seasonal drying and receiving
			nearly daylong open light or only partially shaded.

Source: NatureServe, 2013e

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3.2.3 Bald Eagle

The bald eagle (*Haliaeetus leucocephalus*) is protected by the Bald and Golden Eagle Protection Act and Migratory Bird Treaty Act. Eagles are territorial and exhibit a strong affinity for a nest site once a nest has been established. It is common for a breeding pair to rebuild damaged or lost nests in the same tree or in an adjacent tree. Individual pairs return to the same territory year after year and territories are often inherited by subsequent generations. The nesting period in the southeast United States extends from 01 October to 15 May with most nests completed by the end of November (U.S. Air Force, 2013). Most eagles migrate north during the summer season. In northwest Florida, most successful nests are completed by mid-February. The quality and amount of forage resources, mainly fish and carrion, heavily influence fledgling survival. Typical habitat includes forested areas near water bodies (fresh, estuarine, and marine). Bald eagle occurrence and nesting activity have been documented on BRSF and THSF (FDACS and FFS, 2013; FDACS, 2007).

3.2.4 State Listed Animal Species

All state listed animal species that occur within or adjacent to BRSF and/or THSF are listed in Table 3-4, along with the area of expected occurrence and a brief habitat description. Some of these state listed species are also federally protected.

Table 3-4. State Listed Animal Species at BRSF and THSF

Common Name	Scientific Name	Status	Locations	Habitat
Amphibians	ocientario : wille	- Curus	2004010110	~~~~~~
Reticulated flatwoods salamander	Ambystoma bishopi	E/FE	BRSF	Slash and longleaf pine flatwoods with a wiregrass floor and scattered wetlands.
Frosted flatwoods salamander	Ambystoma cingulatum	T/FT	THSF	Slash and longleaf pine flatwoods with a wiregrass floor and scattered wetlands.
Pine barrens tree frog	Hyla andersonii	SSC	BRSF	Seepage bog pools, which are acidic water pools with decayed vegetation caused by a subsurface water table or accumulated precipitation.
Gopher frog	Rana capito	SSC	BRSF. THSF	Mostly longleaf pine, xeric oak, and sandhills, but also occurs in upland pine forest, scrub, xeric hammock, mesic and scrubby flatwoods, dry prairie, mixed hardwood-pine communities, and a variety of disturbed habitats. May inhabit gopher tortoise burrows.
Florida bog frog	Rana okaloosae	SSC	BRSF	Diverse aquatic areas including shallow, acidic spring seeps; boggy overflows of larger seepage streams; sluggish bends in streams; and pond edges. The dominant vegetation in these habitats includes black titi, sweetbay magnolia. Atlantic white cedar, swamp titi, and blackgum.
One-toed amphiuma	Amphiuma pholeter	N/FP	BRSF: THSF	Riparian areas, forested wetlands. floodplain swamp, and alluvial forests
Reptiles				
Eastern indigo snake	Drymarchon couperi	T/FT	BRSF. THSF	Pine flatwoods. hardwood forests, moist hammocks, and areas surrounding cypress swamps.
Gopher tortoise	Gopherus	T/FC	BRSF.	High, dry, sandy habitats such as longleaf pine-

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	polyphemus		THSF	xeric oak sandhills; also be found in scrub, dry hammocks, pine flatwoods, dry prairies, coastal grasslands and dunes, mixed hardwood-pine communities, and a variety of disturbed habitats such as pastures.
Alligator snapping turtle	Macrochelys temminckii	SSC	BRSF, THSF	Rivers, lakes, backwater swamps, and periodically in brackish water systems.
Barbours map turtle	Graptemys barbouri	SSC/FP	THSF	Rapid flowing waters, primarily in mainstream channels of alluvial rivers and spring-fed streams
Escambia map turtle	Gaptemys ernsti	N/FP	BRSF	Alluvial rivers and streams; riparian and sandy areas
Florida red- bellied turtle	Pseudemys nelson pop. 1	N/FP	THSF	Ponds, lakes, and sluggish portions of rivers and their adjacent habitats
Florida pine snake	Pituophis melanoleucus mugitus	SSC	BRSF	Areas with well-drained sandy soils and moderate to open canopy. Vegetation communities include longleaf pine/furkey oak, sand pine scrub, pine flatwoods on well-drained soils, xeric hammocks, and old fields on former sandhill sites. May use open habitats around wetlands during drought. Uses gopher tortoise burrows.
American alligator Mammals	Alligator mississippiensis	T/FT*	THSF	Freshwater lakes, slow moving rivers, and brackish water labitats.
Sherman's fox squirrel	Sciurus niger shermani	SSC	BRSF, THSF	Open, fire-maintained longleaf pine, turkey oak, sandhills, and flatwooods. Best habitat contains both pines and oaks.
Eastern chipmunk	Tamias striatus	SSC	BRSF	Deciduous forests and hardwood or mixed hardwood-pine forests. Also shrubland.
Florida mouse	Podomys floridanus	SSC	THSF	Fire-maintained, xeric, upland vegetation on well-drained sandy soils, including longleaf pine-turkey oak (sandhill), sand pine scrub, coastal scrub, scrubby flatwoods, upland hammock, live oak (xeric) hammock, and drier pine flatwoods.
Florida black bear	Ursus americanus floridanus	FBBCR	BRSF. THSF	A variety of undeveloped forested communities, often in areas of dense cover, including pine flatwoods, titi swamp, hardwood swamp, cypress swamp, cabbage palm forest, sand pine scrub, and mixed hardwood hammock. Usually in areas that include multiple forest types.
Fish	1			
Gulf sturgeon	Acipenser oxyrinchus desotoi	T/FT	BRSF. THSF	Brackish and salt water during from fall (late October) through winter. In the spring (March), migrate into fresh water rivers and remain there through the summer months.
Bluenose shiner	Pteronotropis welaka	SSC	BRSF	River swamps, backwaters, spring-run streams; areas of aquatic vegetation and in deep pools.
Blackmouth shiner	Notropis melanostmus	Т	BRSF	Backwaters of streams and rivers.
Birds	1			
Red-cockaded woodpecker	Picoides borealis	E/FE	BRSF. THSF	Longleaf, slash, and loblolly pine ecosystems.
Wood stork	Mycteria americana	E/FE	THSF	Mixed hardwood swamps, sloughs, mangroves, and cypress domes/strands. Forage in a variety of wetlands including freshwater and estuarine marshes, limited to depths less than 10-12 inches.
Piping plover	Charadrius	T/FT	THSF	Sandy beaches, sand flats, and mudflats along

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	melodus			coastal areas.
Bald eagle	Haliaeetus leucocephalus	BGEPA	BRSF, THSF	Conifer or hardwood forest, usually close to fresh, estuarine, or marine water bodies supporting occurrence primary food sources including fish, waterfowl, or scabirds. Standing snags or hollow trees may be particularly utilized.
Scott's seaside sparrow	Ammodramus maritimus peninsulae	SSC	THSF	Tidal marshes.
Limpkin	Aramus guarauna	SSC	THSF	Shallows along rivers, streams, takes, and in marshes, swamps and sloughs.
Little blue heron	Egretta caerulea	SSC	THSF	Fresh, salt, and brackish water environments including swamps, estuaries, ponds, lakes, and rivers.
Reddish egret	Egretta rufescens	SSC	THSF	Coastal areas, including bay/sound, herbaceous wetland, lagoon, river mouth/tidal river, scrubshrub wetland, and tidal flat/shore.
Snowy egret	Egretta thula	SSC	THSF	Shallow estuarine areas including mangroves, shallow bays, salt marsh pools, and tidal channels.
Tricolored heron	Egretta tricolor	SSC	THSF	Fresh and saltwater marshes, estuaries, mangrove swamps, lagoons, and river deltas.
White ibis	Eudocimus albus	SSC	THSF	Various salt water and freshwater habitats including marshes, mangroves, lagoons, lakes, marsh prairie, pasture, coastal swamps, and other wetland types.
Southeastern American kestrel	Falco sparverius paulus	Т	THSF	Open woodlands, sandhill, and fire-maintained savannah pine habitats. Will also use alternative habitats including pastures and open fields of residential areas.
Osprey	Pandion haliaetus	SSC	THSF	Coastal areas, lakes, rivers, and swamps.
Invertebrates				
Purple bankclimber	Elliptoideus sloatianus	T/FT	THSF	Slow to moderate current rivers with a sandy floor, possibly with a mud or gravel mixture.
Choctaw bean	Villosa choctawensis	N/FE	BRSF	Large creeks and rivers with moderate current over sand to silty-sand substrates.
Narrow pigtoc	Fusconaia escambia	N/FT	BRSF	Channels of small to medium-sized streams in sand, silty sand, or gravel and in muddy sand in slight current. May also occur in smaller streams and silty backwater areas.
Southern sandshell	Hamiota australis	N/FT	BRSF	Clear, medium-sized creeks to rivers with slow to moderate current and sandy substrates.
Fuzzy pigtoe	Pleurobema strodeanum	N/FT	BRSF	Medium-sized creeks and rivers, in sand and silty sand substrates with slow to moderate current.
Westfall's clubtail	Gomphus westfalli	N/FP	BRSF	Boggy streams and seepages. Larvae burrow in silt, adults forage in open forest near ground level.

Sources: FWC, 2013e; NatureServe, 2013e; *FT due to similarity of appearance

BGEPA = Bald and Golden Eagle Protection Act; BRSF = Blackwater River State Forest; E = State Endangered; FBBCR = Florida Black Bear Conservation Rule; FC = Federal Candidate; FE = Federal Endangered; FP = Federal Petitioned; FT = Federally Threatened, N = No State Listing; SSC = State Species of Special Concern; T = State Threatened; THSF = Tate's Hell State Forest

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3.2.5 State Listed Plant Species

In addition to the four federally listed plant species described above, 38 state listed plant species occur within BRSF and/or THSF. These species are listed in Table 3-5, which includes a designation of upland or wetland habitat type.

Table 3-5. State Listed Plant Species at BRSF and THSF

GN	G-14*6'- N	CLLA	T	H	abitat
Common Name	Scientific Name	Status	Location	Upland	Wetland*
Hairy wild indigo	Baptisia calycosa var. villosa	Т	BRSF	X	
Sweet shrub	Calycanthus floridus	Е	BRSF	X	
Piedmont jointgrass	Coelorachis tuberculosa	Т	BRSF		X
Spoon-leaved sundew	Drosera intermedia	T	BRSF, THSF		X
Trailing arbutus	Epigaea repens	Е	BRSF	Х	
Dwarf witch alder	Fothergilla gardenii	Е	BRSF		X
Mountain laurel	Kalmia latifolia	T	BRSF		X
Bog button	Lachnocaulon digynum	Т	BRSF		X
Panhandle lily	Lilium iridollae	Е	BRSF		X
Hummingbird flower	Macranthera flammea	Е	BRSF, THSF		X
Primrose-flowered butterwort	Pinguicula primuliflora	Е	BRSF		X
Little club-spur orchid	Platanthera clavellata	Е	BRSF		X
Yellow fringeless orchid	Platanthera integra	Е	BRSF		X
Giant orchid	Pteroglossaspis ecristata	T	BRSF	X	
Arkansas oak	Ouercus arkansana	Т	BRSF	X	
Small-flowered meadowbeauty	Rhexia parviflora	Е	BRSF, THSF		X
Florida flame azalea	Rhododendron austrinium	Е	BRSF	Х	
Hairy-peduncled beaksedge	Rhynchospora crinipes	Е	BRSF		Х
White-top pitcher plant	Sarracenia leucophylla	Е	BRSF, THSF		X
Sweet pitcher plant	Sarracenia rubra	T	BRSF		X
Harper's yellow-eyed grass	Xvris scabrifolia	Т	BRSF		X
Narrow-leaved bluestem	Andropogon arctatus	Т	THSF	X	
Southern milkweed	Asclepias viridula	Т	THSF		Х
Scareweed	Baptisia simplicifolia	Т	THSF	X	
Wiregrass gentian	Gentiana pennelliana	Е	THSF		Х
Henry's spider lily	Hymenocallis henryae	Е	THSF		X
Water willow	Justicia crassifolia	Е	THSF		X
Godfrey's blazing star	Liatris provincialis	Е	THSF	Х	
West's flax	Linum westii	Е	THSF		X
Gulf coast lupine	Lupinus westianus	Т	THSF	Х	
Curtiss loosestrife	Lythrum curtissii	Е	THSF		X
White birds-in-a-nest	Machridea alha	E/FT	THSF		X
Florida beargrass	Nolina atopocarpa	Т	THSF	X	
Carolina grass-of-parnassus	Parnassia caroliniana	Е	THSF		X
Pinewood false sunflower	Phoebanthus tenuifolia	T	THSF	Х	
Apalachicola dragonhead	2		THSF		X
Godfrey's butterwort	Pinguicula ionantha	E/FT	THSF		X
Large-leaved jointweed	Polvgonella macrophylla	Т	THSF	X	
Narrow-leaved beakrush	Rhynchospora stenophylla	T	THSF		X
Night flowering petunia	Ruellia noctiflora	Е	THSF		X
Florida skullcap	Scutellaria floridana	E/FT	THSF		X

Source: USF, 2013; *Designated Facultative Wetland and/or Obligate Wetland; BRSF = Blackwater River State Forest; E = State Endangered; FT = Federally Threatened; T = State Threatened; TISF = Tate's Hell State Forest

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4. EFFECTS DETERMINATION

This section discusses potential impacts to protected species located within and adjacent to the action area. Analysis focuses on assessing the potential for impacts from GLI training activities, and on identifying methods to reduce the potential for negative impacts to protected species from these activities.

Impact Categories

Based on the scope of the Proposed Action, potential impacts to sensitive species from implementing training activities can be categorized as follows:

- Direct Physical Impacts—Physical harm (i.e., injury or mortality) to listed species as a
 result of human activities. The main cause of direct physical impacts associated with the
 Proposed Action is physical contact, which could involve the crushing/trampling of, or
 collision with, a species due to vehicle traffic or human movements resulting in physical
 damage or mortality of a species.
- Harassment—Actions that create the likelihood of injury to listed species to such an
 extent as to significantly disrupt normal behavior patterns, which include, but are not
 limited to, breeding, feeding, or sheltering. Activities under the Proposed Action may
 result in harassment due to the following:
 - Foraging/nesting disturbance—Disruption of normal breeding/nesting or foraging activity.
 - Nest/burrow destruction—Destruction of a nest or burrow due to excessive ground disturbance, causing a species to relocate.
- Habitat Impacts—Habitat impacts include loss, alteration, and/or degradation of habitat. These impacts characterize the physical damage, stress, or disruptions that may adversely alter or degrade the habitats essential to the sustainment of a species. A habitat in this instance refers to the ecological and geomorphological components, such as vegetation, soil, topography, and water that support listed species. Activities under the Proposed Action may result in habitat impacts due to the following:
 - Soil erosion—Loss of soil due to ground disturbing activities occurring in or near sensitive species habitat resulting in habitat loss, alteration, or degradation.
 - Sensitive habitat degradation—Degradation or destruction of sensitive habitats such as wetland areas or foraging habitat resulting from human activities (i.e., driving, wildfires) having a negative impact.

Effector Categories

This section utilizes the six effector categories below for analysis. These effector categories are the primary types of activities with the potential for impacts to sensitive species. Table 4-1 identifies the effector categories that apply for each Proposed Action component.

Land Disturbance – entails actions associated with changing the landscape through the disturbance of natural resources, including land clearing/construction, small-scale point impacts (bivouac), incidental surface disturbance, and direct consumption of plants or animals.

Ground Movement – involves the movement of troops (dismounted movement) and wheeled vehicles (i.e., trucks, ATVs) across the training environment.

Expendables and Equipment Usage – associated with utilization of munitions, pyrotechnics, and/or equipment in support of training activities, including blanks, ground burst simulators (GBSs), smoke grenades, simulated munitions, equipment (i.e., generators), and fuel.

Aircraft Operations – involves the use of fixed wing and/or rotary wing aircraft as part of a training activity.

Amphibious Operations – associated with activities in which the main goal is to interact with, and conduct training within, water resources (boating, shoreline interactions, etc.).

Electromagnetic Radiation (EMR) – associated with the use of radar emitters.

4.1 FEDERALLY LISTED SPECIES

This section discusses potential impacts to federally listed species from training activities conducted at BRSF, THSF, and emitter sites. Analyses focus on the potential for impacts from land disturbance, ground movement, expendables and equipment usage, aircraft operations, amphibious operations, and electromagnetic radiation. Impact assessments were made with the understanding that the Conservation Measures in Section 2.3 would be implemented as part of the Proposed Action, thus minimizing or eliminating negative impacts to some sensitive species.

4.1.1 Red-cockaded Woodpecker

RCWs may be impacted by noise and human presence associated with land disturbance, ground movements, and aircraft operations, and noise and wildfires from expendables use. To ensure active RCW trees are identified and protected, Eglin will delineate specific training areas and corridors prior to ground operations to allow for RCW surveys and tree marking. Additionally, THSF and BRSF will continue to implement RCW management activities as detailed in their most current RCW Operations Plans and RCW Five-year Management Plans.

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Table 4-1. Proposed Action Effectors

Proposed Action	Table 4	Table 4-1. Proposed Action Effectors Effector Category							
Component	Land Disturbance	Ground Movement	Expendables /Equipment	Aircraft Ops	Amphibious Ops	EMR			
Emitter Sites	•	•				•			
Establishment of HLZs/DZs	•								
Establishment of Airstrips	•								
Use of Expendables			•						
Light Aviation Proficiency Training	•	•	•	•					
Low-Level Helicopter Insertions/ Extractions	•	•	•	•					
Temporary Combat Support Areas	•	•	•						
Airdrops	•	•	•	•					
Air/Land Vertical Lift	•	•	•	•					
FARP/HGO	•	•	•	•					
Cross-Country Dismounted Movements	•	•	•						
Cross-Country Vehicle Movement	•	•	•						
Vehicle Stream and Wetland Crossing	•	•							
Blackout Driving	•	•							
Emplacement of Obstacles	•	•							
Bivouacking/ Assembly Areas	•	•	•						
Communication and Surveillance Operations	•	•	•						
Amphibious Operations	•	•	•		•				
Natural Resource Consumption	•	•							
Overwater Hoist Operations		•		•	•				
Opposing Forces Vehicle Operations	•	•	•	•					
Hardened Camp Site Use	•	•	•						

DZ = drop zone; EMR = electromagnetic radiation; FARP = forward air refueling point; HGO = hot gas operations; HLZ = helicopter landing zone

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Land Disturbance

Noise and human presence associated with land disturbing activities (i.e., road widening) could disrupt RCW feeding, breeding, and nesting activities. However, noise impacts would be minimal because Eglin will not establish airstrips or HLZs within 500 feet of active RCW trees. Separate analysis would be necessary for any proposed tree clearing within potential RCW habitat, with a possible requirement for additional consultation with the USFWS.

Ground Movements

Troop movements and vehicle traffic may create noise and disturbance that could affect the RCW. To minimize potential for such impacts, Eglin will follow the *Management Guidelines* for the Red-Cockaded Woodpecker on Army Installations (U.S. Army, 2007), which details allowed and restricted activities within 200 ft of active RCW trees. Prior to use of an area for ground movements, an RCW survey would be conducted in the movement corridor, and trees would be marked and added to field maps. Military training within the 200 ft buffer will be limited to military activities of a transient nature (less than two hours of occupation). Some of the activities which are restricted within the 200 foot buffer include generator use, pine tree cutting, and bivouac; a complete list is available in Table 2-4. Additionally, military vehicles are prohibited from occupying a position or traversing within 50 feet of a marked cavity tree, unless on an existing road (U.S. Army, 2007). Minimal impacts to RCWs are anticipated from these transient activities.

Expendables/Equipment Use

Expendables and equipment use would generate noise and smoke that could temporarily disturb or displace RCWs, and there would be a potential for some of these items to start wildfires. Potential noise impacts are minimized by the requirement that training within 200 feet of active RCW trees be of a transient nature (no longer than 2 hours). Additionally, in accordance with the Army guidelines (U.S. Army, 2007), Eglin will only permit the following munitions and pyrotechnics within the 200 foot buffer: small arms blanks, artillery/hand grenade simulators, and smoke grenades (Table 2-4). Generators are restricted within 200 feet of RCW trees. RCWs on BRSF and THSF have demonstrated a degree of adaptability to noise from hunting and other recreational activities and likely have become habituated to these types of noise, at least to some extent, and continue to nest successfully within the forests. Suitable habitat appears to outweigh any negative influences associated with noise.

Expendables can also produce chemical residue that could potentially impact birds through direct contact, ingestion, inhalation, or bio-concentration. The most likely opportunity for such exposure would be immediately after the smoke has been dispelled. However, birds would most likely leave the area during training exercises, thereby reducing the likelihood of direct exposure. The potential for ingestion or inhalation of particles in sufficient amounts to cause harm is also low, due to wind-driven distribution of smoke particles. Additionally, cleanup procedures require that munitions cartridges and expendables debris be picked up after a training mission has been completed.

Expendables use can result in an increased risk of wildfires. Wildfires can be beneficial in some cases, but they can also have negative effects on habitats and species, particularly under dry or

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windy conditions. In general, fire is beneficial to the ecosystems found within the action area; fire maintains the native groundcover that supports RCW prey items, and hinders predator access to cavities by decreasing mid-story encroachment. However, wildfires have the potential to damage or kill active RCW cavity trees and trees in foraging habitat if the trees ignite, and may affect individual birds if they are present in the cavity at the time the tree is burning.

Multiple actions will reduce the potential for wildfire impacts, including restriction of campfires and pyrotechnics use during high fire danger periods, frequent prescribed fire in quality RCW foraging habitat, preparation of active RCW cavity trees prior to prescribed burns by removing fuels from the immediate vicinity of the tree, and checks of burn progress in the vicinity of RCW trees by biologist rangers to reduce the potential for fire damage. Additionally, the Air Force will work with the FFS to develop a process similar to the *Wildfire Specific Action Guide* used at Eglin (Table 4-2); these guidelines limit the use of pyrotechnics and campfires on days with higher risk of wildfire, and institutes fire checks (visual observation) after the use of pyrotechnics or munitions. Units will be required to check the fire danger rating daily and to follow the applicable restrictions.

Table 4-2. Wildfire Specific Action Guide Restrictions on Eglin AFB

Fire Danger Rating	Restrictions
Low	No restrictions on missions.
Moderate	No restrictions on pyrotechnics. A fire watch must be posted for at least 20 minutes after completing the use of pyrotechnics.
High	Use caution with pyrotechnics. Post a fire watch for a minimum of 30 minutes after completing use of pyrotechnics. Extra precautions required for campfires.
Very High	Restrict pyrotechnics to hand-thrown simulators or smoke grenades. NO FLARES below 1000 AGL*. Use simulators or grenades only on roads or in pits. Cleared areas for pyrotechnics should be a minimum of 1.5 times the blast radius. No campfires.
Extreme	NO PYROTECHNICS allowed without prior approval from the Wildland Fire Program Manager or their designee at Eglin Natural Resources. No campfires.

^{*}No flares will be used during training operations at BRSF or THSF; AGL = above ground level.

Aircraft Operations

Noise produced by aircraft overflights and helicopter hovering could cause short-term startle effects of individuals inhabiting areas surrounding the LZs/DZs. However, there will be a 500 ft buffer around RCW trees where aircraft operations and LZ/DZ establishment will be restricted. Also, birds would likely habituate to aircraft presence over time, given the ongoing tempo of day-to-day training. Some degree of habituation may already exist for some individuals because a variety of aircraft overflights by civilians, the FFS, and the military currently occurs in the forest regions. Most affected individuals would likely resume normal activities soon after training events are completed. Long-term reactions or significant behavior modifications are not expected from visual aircraft sightings.

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Electromagnetic Radiation

Emitter site use would not be expected to result in impacts to RCWs, because RCW habitat would be avoided. The small footprint of the emitter equipment and the use of improved and semi-improved areas would not damage native vegetation. Exposure to potentially harmful levels of EMR is highly unlikely, given that RCWs are not likely to approach areas where humans are active.

Summary of Impacts

With the implementation of conservation measures in Section 2.3, GRASI LI activities may affect, but are **not likely to adversely affect** the RCW.

4.1.2 Wood Stork

Although the wood stork is considered to only have potential occurrence at the THSF, if any wood storks are found on the forest, they could be disturbed by GLI activities. Training operations would involve an increase in human activities, possibly causing flight of foraging/roosting wood storks; however, if any wood stork nesting, feeding, or roosting areas were documented on THSF in the future, GLI activities would follow the *Habitat Management Guidelines for the Wood Stork in the Southeast Region* (USFWS, 1990), which limit human activities when feeding, roosting, or nesting wood storks are present. Additionally, ground disturbing activities and pyrotechnics use are restricted in wetland areas which are the primary habitat for wood storks. There would be potential adverse impacts to shoreline and aquatic vegetation due to trampling/rutting associated with landing of watercraft along shorelines, but these impacts would be short term and recoverable through practices such as rotation of boat landing sites.

With the implementation of conservation measures in Section 2.3, GRASI LI activities may affect, but are **not likely to adversely affect** the wood stork.

4.1.3 Reticulated Flatwoods Salamander and Critical Habitat

Potential impacts to the reticulated flatwoods salamander and its critical habitat at BRSF are minimized by the restriction on activities in the vicinity of the pond, which is located along the southern boundary of the forest. Within the 1500 buffer around the salamander pond, there will be no land disturbing activities for emitter sites or airstrip/LZ/DZ establishment, and all ground operations must remain on established roads including troop movements, vehicle operations, digging and any type of ground surface disturbance. If any additional ponds are identified during future surveys, the same 1500 foot buffer and associated restrictions would apply.

The primary activity of concern for the flatwoods salamander is the use of expendables. Expendables use is not anticipated to affect flatwoods salamanders from chemical residue because their use is restricted within the 1500 foot buffer; however, wildfires started by expendables may impact the flatwoods salamander. In general, fire is beneficial to salamander habitat by maintaining the grassy understory and preventing mid-story encroachment, but fires can cause damage if they burn too hot, smolder, or if fire suppression activities are necessary. Wildfires and wildfire suppression activities in salamander habitat may negatively affect the

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flatwoods salamander through modification of hydrology, vegetative damage, sedimentation, and direct mortality. Salamanders may be killed by heavy equipment used during suppression or by the wildfire itself; however, this is unlikely given that salamanders spend the majority of their time underground when not in the breeding pond itself. Additionally, the following special precautions will be followed when prescribed burning or fighting wildfires in sensitive areas on state forest lands. The Incident Commander or Burn Boss will make personnel on fires aware of environmentally sensitive areas, such as flatwoods salamander habitat. During wildfire suppression, emphasis is placed on the use of water and foam, permanent fire breaks, natural barriers and existing roads and trails for firelines. Plowed and/or bulldozed lines will be used only when they prevent the most damage to life, property, or resources and minimize threats to fire fighters. When an area is to be plowed out, lines will be kept to a minimum by following these practices:

- Use the minimum number of plow lines necessary to contain the fire.
- Fire plow line depth should be no greater than minimum required to contain the fire.
- Fire plow lines should not be located in sensitive areas unless required by the emergency nature of the incident. Offset plow lines well to the side of the sensitive area if possible.
- Fire plow lines should be oriented along contours of slope whenever possible.
- Fire plow lines will not bisect or tie into waterways or riparian zones, or be placed downhill at right angles to steep slopes unless required by the emergency nature of the incident. All plow lines will be stabilized and/or rehabilitated following the emergency suppression action.

With the implementation of conservation measures in Section 2.3, GRASI LI activities may affect, but are **not likely to adversely affect** the reticulated flatwoods salamander, and are **not likely to adversely modify** reticulated flatwoods salamander critical habitat.

4.1.4 Frosted Flatwoods Salamander and Critical Habitat

Potential impacts to the frosted flatwoods salamander and its critical habitat at THSF are minimized by the restriction on activities within 1500 feet of the salamander pond, which is located just outside the northern boundary of the forest. If any additional ponds are identified during future surveys, the same 1500 foot buffer and associated restrictions would apply. Possible impacts from expendables would be similar to those described for the reticulated flatwoods salamander.

With the implementation of conservation measures in Section 2.3, GRASI LI activities may affect, but are **not likely to adversely affect** the frosted flatwoods salamander and are **not likely to adversely modify** frosted flatwoods salamander critical habitat.

4.1.5 Eastern Indigo Snake

Land disturbance, ground movements, and expendables use have the potential to affect indigo snakes through crushing, wildfires, and chemical impacts. Incidental contact with equipment, vehicles, and troops on foot could result in trampling or crushing of indigo snakes. However, encounters with indigo snakes would be extremely rare given the scarcity of this species on

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BRSF and THSF, combined with the snake's ability to escape from potentially injurious situations. Eglin will require that all personnel be informed that if an indigo snake is sighted, they must allow the snake to leave the area undisturbed and immediately report the sighting to Eglin Natural Resources. If an activity has the potential to create significant soil disturbance, a gopher tortoise survey will be completed prior to the activity. If a gopher tortoise burrow is found during the survey and cannot be avoided, then any commensal species such as the indigo snake found in a burrow would be relocated in accordance with the *Eglin AI'B Indigo Snake Programmatic Biological Opinion* (USFWS, 2009c).

Wildfires caused by expendables and chemical residue from expendables may affect the indigo snake. Chemicals can interfere with biological processes and physiological functions of reptiles. To minimize exposure, cleanup of munitions cartridges and debris by training groups is required after training is completed. Heavy equipment used during fire suppression could also impact the indigo snake; however, this occurrence is unlikely, as the snake would most likely move away from the area if it sensed a general disturbance in its vicinity, and operators would be instructed to avoid the snake.

With the implementation of conservation measures in Section 2.3, GRASI LI activities may affect, but are **not likely to adversely affect** the eastern indigo snake.

4.1.6 Gulf Sturgeon and Critical Habitat

Gulf sturgeon and its critical habitat could be affected by sedimentation, chemical impacts, and direct impacts from land disturbance, ground movements, expendables, and amphibious operations. However, the limitation on ground disturbing activities and pyrotechnics use within 100 feet of Gulf sturgeon critical habitat greatly reduces this potential. Amphibious operations adjacent to BRSF TA-9 and THSF TA-10 would move through Gulf sturgeon critical habitat, but the activities would not alter or disturb this species or its habitat. To minimize the potential for erosion, amphibious operations along the Yellow River (BRSF TA-9) and coastal areas at THSF (TA-10) would only use designated boat landing sites, preferably hardened landing areas.

There are no low water crossings in the portion of BRSF that drains to the Yellow River, or in the portion of THSF that drains to the Gulf of Mexico. The portion of the Blackwater River that contains critical habitat for the Gulf sturgeon is over two miles downstream from BRSF. There is a small possibility that sediment disturbed during stream crossings could reach critical habitat on the Blackwater River; however, events involving stream crossings will be infrequent (up to 12 annually with up to 10 vehicles per event) and vehicle access will be prohibited at stream and wetland crossings rated in poor condition. No impacts to Gulf sturgeon critical habitat at THSF or BRSF are anticipated from low water crossing activities.

With the implementation of conservation measures in Section 2.3, GRASI LI activities may affect, but are **not likely to adversely affect** the Gulf sturgeon and are **not likely to adversely modify** Gulf sturgeon critical habitat.

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4.1.7 Piping Plover and Critical Habitat

Training activities would avoid piping plover critical habitat thereby reducing the potential for impacts to plovers. However, helicopter and low-level aircraft activities, and amphibious and land-based activities outside of critical habitat may result in a startle effect to plovers near the area and could temporarily interfere with foraging activities. In these situations, noise associated with the training activities could temporarily flush the birds from the area, possibly causing stress and extra caloric expenditure; however, birds would be expected to simply move on to undisturbed foraging areas during the course of the activity. Because disturbance would be temporary and localized in nature, these activities may cause minimal harassment to piping plovers and no direct impacts are expected. Piping plover designated critical habitat and other known piping plover feeding areas (including those outside of designated critical habitat) will be marked on field maps for avoidance.

With the implementation of conservation measures in Section 2.3, GRASI LI activities may affect, but are **not likely to adversely affect** the piping plover and would have **no effect** on piping plover critical habitat.

4.1.8 Purple Bankclimber and Critical Habitat

The purple bankclimber and its critical habitat could be affected by sedimentation and chemical impacts. However, the limitation on ground disturbing activities and pyrotechnics use within 100 feet of purple bankclimber critical habitat greatly reduces this potential. Amphibious operations would move through purple bankclimber critical habitat, but the activities would not alter or disturb this species or its habitat. To minimize the potential for erosion, amphibious operations along the portion of the Ochlocknee River where there is critical habitat (northern portion of TA-3 at THSF) would only use designated boat landing sites, preferably hardened landing areas.

There is only one low water crossing in the portion of THSF that drains to the Ochlocknee River, and it is over one mile from bankclimber critical habitat, thus no impacts to the bankclimber are anticipated from low water crossing activities.

With the implementation of conservation measures in Section 2.3, GRASI LI activities may affect, but are **not likely to adversely affect** the purple bankclimber and are **not likely to adversely modify** purple bankclimber critical habitat.

4.1.9 Choctaw Bean, Narrow Pigtoe, Southern Sandshell, Fuzzy Pigtoe and Critical Habitat

The Choctaw bean, narrow pigtoe, southern sandshell, and fuzzy pigtoe and their critical habitat could be affected by sedimentation and chemical impacts. However, the limitation on ground disturbing activities and pyrotechnics use within 100 feet of their critical habitat greatly reduces this potential. Amphibious operations would move through mussel critical habitat, but the activities would not alter or disturb these species or their habitat. To minimize the potential for erosion, amphibious operations along the Yellow River (BRSF TA-9) would only use designated boat landing sites, preferably hardened landing areas.

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There are no low water crossings in the portion of BRSF that drains to the Yellow River, thus no impacts to the freshwater mussels in the Yellow River are anticipated from low water crossing activities.

With the implementation of conservation measures in Section 2.3, GRASI LI activities may affect, but are **not likely to adversely affect** the Choctaw bean, narrow pigtoe, southern sandshell, or fuzzy pigtoe, and are **not likely to adversely modify** freshwater mussel critical habitat.

4.1.10 Godfrey's Butterwort

Activities with the potential to impact the Godfrey's butterwort include land disturbance, ground movement, and expendables use. However, prior to any land disturbance, areas must be surveyed for sensitive species, thus any butterworts in the area would be identified. All known locations of Godfrey's butterwort will be shown as "restricted" on field maps, which means that all activities must remain on roadbeds of established roads, including troop movements, vehicle operations, digging, and any type of ground surface disturbance. Additionally, all known locations of the butterwort at THSF are within wetland areas and Florida Natural Areas Inventory (FNAI)-designated Special Natural Areas, where ground disturbing activities are also limited.

Wildfires caused by expendables use have the potential to affect the Godfrey's butterwort. In general, fire is beneficial by limiting the growth of shrubs and saplings in the understory, but fires can cause damage if they burn too hot, smolder, or if fire suppression activities are necessary. Wildfires and wildfire suppression activities may negatively affect the butterwort through modification of hydrology and direct mortality. Plants may be unintentionally killed by heavy equipment used during suppression or by the wildfire itself. However, fire crews are directed to avoid plowing off established roads within sensitive wetland areas except in extreme conditions.

No GRASI LI activities would involve the intentional damaging or destruction of the Godfrey's butterwort, and GRASI LI activities would not jeopardize the continued existence of the butterwort. With the implementation of conservation measures in Section 2.3, GRASI LI activities may affect, but are **not likely to adversely affect** the Godfrey's butterwort.

4.1.11 Florida Skullcap

Land disturbance, ground movement, and expendables use have the potential to impact the Florida skullcap. However, prior to any land disturbance, areas must be surveyed for sensitive species, thus any skullcaps in the area would be identified. All known locations of the Florida skullcap will be shown as "restricted" on field maps, which means that all activities must remain on roadbeds of established roads, including troop movements, vehicle operations, digging, and any type of ground surface disturbance. Additionally, the Florida skullcap is found in wetland habitats, where activities are limited to established roads, including vehicle operations, digging, and any type of ground surface disturbance. Potential impacts from wildfires would be similar to those described earlier for the Godfrey's butterwort.

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No GRASI LI activities would involve the intentional damaging or destruction of the Florida skullcap, and GRASI L1 activities would not jeopardize the continued existence of the skullcap. With the implementation of conservation measures in Section 2.3, GRASI LI activities may affect, but are **not likely to adversely affect** the Florida skullcap.

4.1.12 White Birds-in-a-nest

White-birds-in-a-nest may be affected by land disturbance, ground movement, and expendables use. However, prior to any land disturbance, areas must be surveyed for sensitive species, thus any white birds-in-a-nest in the area would be identified. All known locations of the white birds-in-a-nest will be shown as "restricted" on field maps, which means that all activities must remain on roadbeds of established roads, including troop movements, vehicle operations, digging, and any type of ground surface disturbance. Additionally, the white birds-in-a-nest is typically found in wetland habitats, where activities are limited to established roads, including vehicle operations, digging, and any type of ground surface disturbance. Potential impacts from wildfires would be similar to those described earlier for the Godfrey's butterwort.

No GRASI LI activities would involve the intentional damaging or destruction of the white birds-in-a-nest, and GRASI LI activities would not jeopardize the continued existence of the white birds-in-a-nest. With the implementation of conservation measures in Section 2.3, GRASI LI activities may affect, but are **not likely to adversely affect** the white birds-in-a-nest.

4.1.13 Telephus Spurge

There are currently no documented occurrences of the telephus spurge on THSF. If this species is found on the forest in the future, then that area would be shown as "restricted" on field maps, which means that all activities must remain on roadbeds of established roads, including troop movements, vehicle operations, digging, and any type of ground surface disturbance. Additionally, prior to any land disturbance, areas must be surveyed for sensitive species, thus any spurges in the area would be identified. Potential impacts from wildfires would be similar to those described earlier for the Godfrey's butterwort.

No GRASI LI activities would involve the intentional damaging or destruction of the telephus spurge, and GRASI LI activities would not jeopardize the continued existence of the spurge. GRASI LI activities may affect, but are **not likely to adversely affect** the telephus spurge.

4.1.14 Conservation Measures

The Conservation Measures in Section 2.3 of this GLI Section 7 Consultation are commitments made by Eglin AFB as part of the Proposed Action. Proponents are responsible for ensuring these Conservation Measures are implemented. If Eglin AFB (1) fails to assume and assure implementation of the Conservation Measures or (2) fails to require the participants in the GLI activities to adhere to the Conservation Measures through enforceable terms, the protective coverage of section 7(o)(2) of the ESA may lapse, and may result in penalties, fines, and immediate operational shut-down of the GLI training activity.

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4.1.15 Summary of Potential Impacts

The following tables summarize the potential for direct physical impacts, harassment impacts, and habitat impacts to federally listed species at BRSF and THSF (Table 4-3 and Table 4-4).

Table 4-3. Potential Impacts to Federally Listed Species at BRSF

Proposed Activity	Red-cockaded Woodpecker	Reticulated Flatwoods Salamander and Critical Habitat	Eastern Indigo Snake	Gulf Sturgeon and Critical Habitat	Yellow River Mussel Species and Critical Habitat
Land Disturbance	Н	NI			
Ground Movement	H, Hb	INI	DPI, H. Hb	H	lb
Expendables/Equipment	ח, חט	DPI, Hb			
Aircraft Operations	Н	·		NI	Hb
Amphibious Operations	NI	N	II	DPI, H, Hb	1 10
Electromagnetic Radiation	141			N	11

DPI = Direct Physical Impact, H = Harassment, Hb = Habitat Impacts, NI = No Impact

Table 4-4. Potential Impacts to Federally Listed Species at THSF

Proposed Activity	Red-cockaded Woodpecker	Wood Stork	Frosted Flatwoods Salamander and Critical Habitat	_	Gulf Sturgeon and Critical Habitat	Piping Plover and Critical Habitat	Godfrey's Butterwort	Florida Skullcap	White Birds-in-a- nest	Telephus Spurge	Purple Bankelimber and Critical Habitat
Land Disturbance	H	1		DPI.				NI			
Ground Movement			NI H, Hb		Hb	DPI, H	DPI, Hb				
Expendables/Equipment	H, Hb		DPI, Hb				<i>B</i> 11, 110			Hb	
Aircraft Operations	Ī	Ŧ			NI	Н]
Amphibious Operations	NI H,		NI	NI	DPI, H. Hb			N	ΝΙ		
Electromagnetic Radiation		NI			N	11					NI

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4.2 OTHER SPECIES CONSIDERED

4.2.1 Gopher Tortoise

While it is possible that gopher tortoises or their burrows could be directly impacted during ground training exercises, this risk would be minimal due to the fact that vehicle movements would be limited to established roads, and any burrows identified at the camps sites, HLZ/LZ areas, or other high use areas would be marked for avoidance by 25 feet. If a tortoise burrow could not be avoided by 25 ft, then Eglin would be required to obtain a gopher tortoise relocation permit from the FWC and conduct the relocation of the tortoise in accordance with FWC protocols (described at http://myfwc.com/media/1410274/GTPermittingGuidelines.pdf). Similarly, areas slated for ground disturbing activities would be surveyed for gopher tortoises, and burrows would be avoided where possible; burrows that cannot be avoided would be relocated. Units will be informed that if a gopher tortoise is sighted, personnel must allow the tortoise to leave the area undisturbed.

Expendables may affect the gopher tortoise from chemical residue or wildfire suppression impacts. Chemical residue from expendables has the potential to impact gopher tortoise health if ingested or accumulated in soils and water. Chemicals can interfere with biological processes and physiological functions of reptiles. To minimize exposure, cleanup of munitions cartridges and debris by training groups is required after training is completed. The gopher tortoise may also be affected by heavy equipment used during wildfire suppression. However, this occurrence is unlikely, as the tortoise would most likely move away from the area if it sensed a general disturbance in its vicinity. Equipment operators would be directed to avoid any tortoises or burrows they spot.

With the implementation of conservation measures in Section 2.3, impacts from GRASI LI activities would not be significant to the gopher tortoise.

4.2.2 Federally Petitioned Animal Species

Land disturbance, ground movement, expendables use, and amphibious operations may impact the following federally petitioned animal species: Westfall's clubtail, one-toed amphiuma, Barbour's map turtle, Escambia map turtle, and Florida red-bellied turtle. However, the limitation on ground disturbing activities and pyrotechnics use within 100 feet of streams and wetlands greatly reduces this potential. Adult clubtails may forage in open forest where ground operations occur, however, the likelihood of encounters is very low because most ground operations would be on established roads and cross-country dismounted movements are infrequent and dispersed (up to eight times annually with up to 72 personnel per event). The remainder of these species, along with the larval form of the clubtail, are found in aquatic, wetland, and riparian habitats, where activities are limited to established roads, including vehicle operations, digging, and any type of ground surface disturbance. Amphibious operations may prompt basking turtles to drop into the water, but turtles would be expected to return once boats had passed. The small number of operations involving the use of low water crossings (up to 12 annually with up to 10 vehicles per event) has a low probability of impacts to federally petitioned species, however, the Air Force will implement the following conservation measures to reduce potential impacts: 1) low-water crossings on known Westfall's clubtail streams would not be

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used, and 2) troops would check for turtles prior to use of low-water crossings and allow the turtles to clear the crossing before use. Additionally, all known locations of these petitioned species will be shown as "restricted" on field maps, which means that all activities must remain on roadbeds of established roads, including troop movements, vehicle operations, digging, and any type of ground surface disturbance.

With the implementation of conservation measures in Section 2.3, impacts from GRASI LI activities would not be significant to the Westfall's clubtail, one-toed amphiuma, Barbour's map turtle, Escambia map turtle, or Florida red-bellied turtle.

4.2.3 Federally Petitioned Plant Species

Land disturbance, ground movement, and expendables use have the potential to impact the following federally petitioned plant species: West's flax, Curtiss' loosestrife, bear tupelo, small-flower meadow-beauty, Henry's spider-lily, Panhandle lily, and Gulf sweet pitcher plant. However, all known locations of these species will be shown as "restricted" on field maps, which means that all activities must remain on roadbeds of established roads, including troop movements, vehicle operations, digging, and any type of ground surface disturbance. Additionally, these species are found in wetland habitats, where GLI activities are limited to established roads.

Wildfires caused by expendables use have the potential to affect these plant species. In general, fire is beneficial these species, but fires can cause damage if they burn too hot, smolder, or if fire suppression activities are necessary. Wildfires and wildfire suppression activities may negatively affect these plants through modification of hydrology and direct mortality. Plants may be unintentionally killed by heavy equipment used during suppression or by the wildfire itself. However, fire crews are directed to avoid plowing off established roads within sensitive wetland areas except in extreme conditions.

With the implementation of conservation measures in Section 2.3, impacts from GRASI LI activities would not be significant to the West's flax, Curtiss' loosestrife, bear tupelo, small-flower meadow-beauty, Henry's spider-lily, Panhandle lily, or Gulf sweet pitcher plant.

4.2.4 Bald Eagle

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The primary issue of concern for the bald eagle is the potential for impacts from human presence and noise. To avoid these impacts, buffer zones will be delineated for nest trees. Aircraft operations will not occur within 1,000 feet of an eagle nest during the nesting season (October 1 to May 15), and training activities will follow the *National Bald Eagle Management Guidelines* within 330 feet of an eagle nest during the nesting season. Potential exposure to chemical residue is minimized by required cleanup of munitions cartridges and debris by training groups once training is complete.

With the implementation of conservation measures in Section 2.3, impacts from GRASI LI activities would not be significant to the bald eagle.

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4.2.5 State-listed Animal Species

In accordance with the *Florida Endangered Species Protection Act*, no GRASI L1 activities would involve the intentional wounding or killing of any state-listed fish or wildlife species. The list of animal species approved for consumption will not include any state-listed species; pictures will be provided to troops so that only approved species are taken.

With the implementation of conservation measures in Section 2.3, impacts from GRASI LI activities would not be significant to State-listed animal species.

4.2.6 State-listed Plant Species

In accordance with the *Florida Endangered Species Protection Act* and the *Preservation of Native Flora of Florida Act*, no state-listed plants would be purposefully harvested or destroyed. The list of plant species approved for consumption, camouflage, and other mission uses will not include any state-listed species; pictures will be provided to troops so that only approved species are taken.

With the implementation of conservation measures in Section 2.3, impacts from GRASI LI activities would not be significant to State-listed plant species.

5. CONCLUSION

Based on analysis of potential direct physical impacts, harassment, and habitat impacts associated with the proposed land disturbance, ground movement, expendables/equipment use, amphibious operations, and air operations, the RCW, wood stork, reticulated flatwoods salamander and critical habitat, frosted flatwoods salamander and critical habitat, eastern indigo snake, Gulf sturgeon and critical habitat, piping plover and critical habitat, purple bankclimber and critical habitat, Choctaw bean and critical habitat, narrow pigtoe and critical habitat, southern sandshell and critical habitat, fuzzy pigtoe and critical habitat, Godfrey's butterwort, Florida skullcap, white birds-in-a-nest, and telephus spurge may be affected, but are not likely to be adversely affected by the Proposed Action. Eglin will implement the Conservation Measures listed in Section 2.3 to minimize potential negative effects of GLI activities.

The NRS will notify the USFWS immediately if any of the actions considered in this Biological Assessment are modified or if additional information on listed species becomes available, as a re-initiation of consultation may be required. If impacts to listed species occur beyond what has been considered in this assessment, all operations will cease, and the USFWS will be notified. Any modifications or conditions resulting from consultation with the USFWS will be implemented prior to commencement of activities.

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INFORMAL CONSULTATION REGARDING

IMPACTS TO FEDERALLY LISTED SPECIES RESULTING FROM GULF REGIONAL AIRSPACE STRATEGIC INITIATIVE (GRASI) LANDSCAPE INITIATIVE TRAINING AREAS

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Panama City, FL

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APPENDIX D

AIR QUALITY

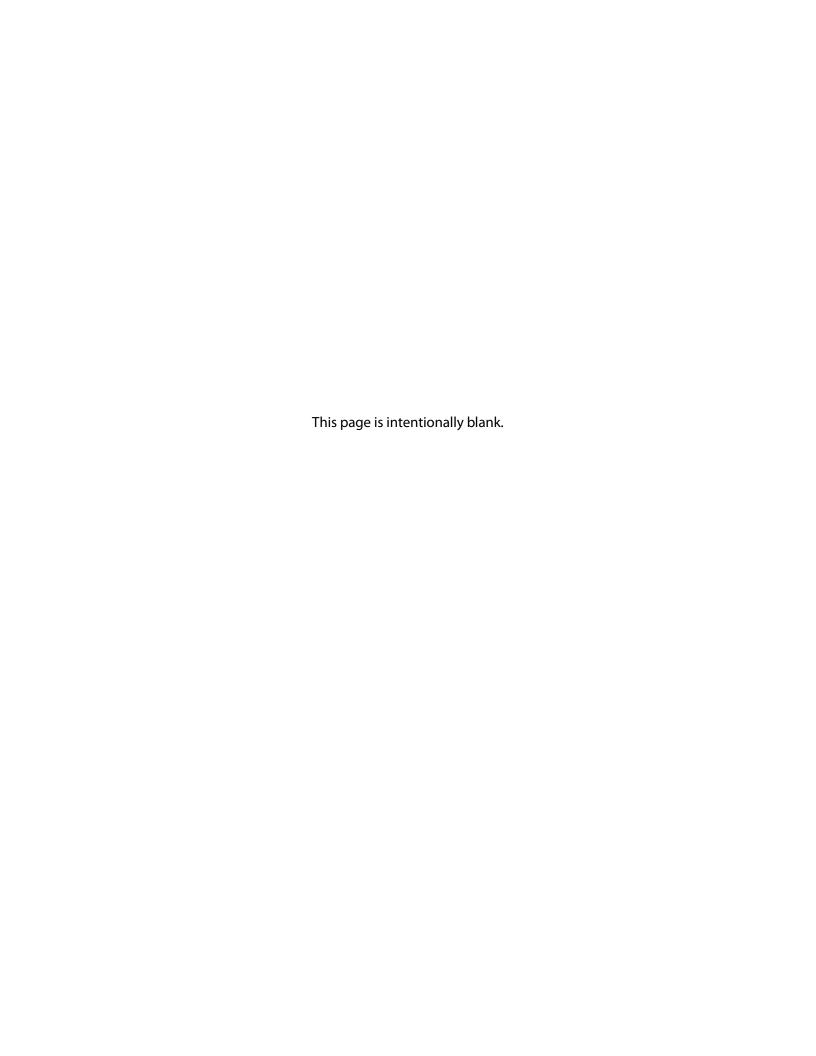


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ACRONYMS, ABBREVIATIONS, AND SYMBOLS

A/LVL Air/Land Vertical Lift

ACAM Air Conformity Applicability Model

AD Airdrops

AGL above ground level

CAA Clean Air Act

CEQ Council on Environmental Quality
CFR Code of Federal Regulations

CH₄ methane

CO carbon monoxideCO₂ carbon dioxide

CO₂-e carbon dioxide equivalents

CY calendar year EF emission factor

EIS Environmental Impact Statement

EP pollutant emission

FARP/HGO Forward Air Refueling Point/Hot Gas Operations **FDEP** Florida Department of Environmental Protection

FR Federal Register

ft² square feet

GHG greenhouse gas

HAP hazardous air pollutantHCSU Hardened Camp Site Use

HMMWV high-mobility multipurpose wheeled vehicle, "humvee"

hp horsepowerhp-hr horsepower-hours

hr hours **JP-8** jet fuel

LAPT Light Aviation Proficiency Training

Ib poundsLF load factor

LLHI/E Low-Level Helicopter Insertions/Extractions

LTO landing and takeoff

mg/m³ milligrams per cubic meter

mm millimeter N₂O nitrous oxide

NAAQS National Ambient Air Quality Standards

NEI National Emissions Inventory
NEPA National Environmental Policy Act

NF no factor given
NO₂ nitrogen dioxide
NO₂ nitrogen oxides

O₃ ozone

OHO Overwater Hoist Operations

OT operating time

Pb lead

PM particulate matter

 PM_{10} particulate matter with diameter less than or equal to 10 micrometers $PM_{2.5}$ particulate matter with diameter less than or equal to 2.5 micrometers

ppb parts per billion
 ppm parts per million
 ROD Record of Decision
 ROI region of influence

SAQMD Sacramento Air Quality Management District **SCAQMD** South Coast Air Quality Management District

SO₂ sulfur dioxideTGO touch and goU.S. United States

USEPA U.S. Environmental Protection Agency

VOC volatile organic compound

yr Year

μg/m³ micrograms per cubic meter

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D. AIR QUALITY

- 2 This appendix presents an overview of the Clean Air Act (CAA) and the state of Florida air
- 3 quality program. The appendix also discusses emissions factor development and calculations,
- 4 including the assumptions used for the air quality analyses presented in the Air Quality
- 5 sections.

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D.1 AIR QUALITY PROGRAM OVERVIEW

- 7 In order to protect public health and welfare, the United States (U.S.) Environmental
- 8 Protection Agency (USEPA) has developed numerical concentration-based standards, or
- 9 National Ambient Air Quality Standards (NAAQS), for six "criteria" pollutants (based on
- health-related criteria) under the provisions of the CAA Amendments of 1970. There are two
- kinds of NAAQS: primary and secondary standards. Primary standards prescribe the
- maximum permissible concentration in the ambient air to protect public health, including the
- health of "sensitive" populations such as asthmatics, children, and the elderly. Secondary
- standards prescribe the maximum concentration or level of air quality required to protect
- public welfare, including protection against decreased visibility, damage to animals, crops,
- vegetation, and buildings (40 Code of Federal Regulations [CFR] 50).
- 17 The CAA gives states the authority to establish air quality rules and regulations. These rules
- and regulations must be equivalent to, or more stringent than, the federal program. The
- 19 Division of Air Resource Management within the Florida Department of Environmental
- 20 Protection (FDEP) administers the state's air pollution control program under the authority of
- the Florida Air and Water Pollution Control Act and the Environmental Protection Act.
- 22 Florida has adopted the NAAQS except for sulfur dioxide (SO₂). The USEPA has set the annual
- 23 and 24-hour standards for SO₂ at 0.03 parts per million (ppm) (80 micrograms per cubic meter
- 24 [μg/m³]) and 0.14 ppm (365 μg/m³), respectively. Florida has adopted the more stringent
- 25 annual and 24-hour standards of 0.02 ppm (60 μg/m³) and 0.1 ppm (260 μg/m³), respectively.
- 26 In addition, Florida has adopted the national secondary standard of 0.50 ppm (1,300 μg/m³).
- 27 Federal and state of Florida ambient air quality standards are presented in <u>Table D-1</u>.
- 28 Based on measured ambient air pollutant concentrations, the USEPA designates areas of the
- 29 U.S. as having air quality better than the NAAQS (attainment), worse than the NAAQS
- 30 (nonattainment), and unclassifiable. The areas that cannot be classified (on the basis of
- available information) as meeting or not meeting the NAAQS for a particular pollutant are
- 32 *unclassifiable* and are treated as attainment until proven otherwise. Attainment areas can be
- further classified as maintenance areas, which are areas previously classified as nonattainment
- 34 but where air pollutant concentrations have been successfully reduced to below the
- standard. Maintenance areas are under special maintenance plans and must operate under
- some of the nonattainment area plans to ensure compliance with the NAAQS. All areas of the
- 37 state are in compliance with the NAAQS. Therefore, every county within the project region of
- influence (ROI) is classified as being in attainment.

Table D-1. Summary of National and State Ambient Air Quality Standards

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Criteria Pollutant	Averaging Time	Federal Primary NAAQS	Federal Secondary NAAQS	Florida Standards
Carbon monoxide (CO) ¹	8-hour	9 ppm	No standard	9 ppm
		(10 mg/m ³)		(10 μg/m ³)
	1-hour	35 ppm	No standard	35 ppm
		(40 mg/m ³)		(40 μg/m ³)
	rolling 3-month			
Lead (Pb) ²	average	0.15 μg/m ³	0.15 μg/m ³	0.15 μg/m ³
Nitrogen dioxide (NO ₂) ³	Annual	0.053 ppm	0.053 ppm	0.053 ppm
		(100 μg/m ³)	(100 μg/m ³)	(100 µg/m³)
	1-hour	100 ppb	No standard ⁸	100 ppb
Particulate matter with diameter less than or equal to 10 micrometers (PM ₁₀) ⁴	24-hour	150 μg/m³	150 µg/m³	150 μg/m³
Particulate matter with	Annual	15 μg/m ³	15 μg/m ³	15 μg/m ³
diameter less than or equal to 2.5 micrometers (PM _{2.5}) ⁵	24-hour	35 μg/m³	35 μg/m³	65 μg/m³
Ozone (O ₃) ⁶	8-hour	0.08 ppm	0.08 ppm	
		(157 μg/m³)	(157 µg/m³)	
Sulfur dioxide (SO ₂) ⁷	Annual	0.03 ppm	No standard	0.02 ppm
		(80 μg/m³)		(60 μg/m ³)
	24-hour	0.14 ppm	No standard	0.10 ppm
		(365 µg/m³)		(260 µg/m ³)
	3-hour	No standard	0.50 ppm ⁸	0.50 ppm
			(1,300 μg/m³)	(1,300 μg/m ³)
	1-hour	75 ppb	No standard	No standard

Source: USEPA, 2006 (federal standards); FDEP, 2010 (Florida standards)

 μ g/m³ = micrograms per cubic meter; mg/m³ = milligrams per cubic meter; NAAQS = National Ambient Air Quality Standards; ppb parts per billion; ppm = parts per million

- 1. USEPA plans on promulgating a new carbon monoxide (CO) standard in August 2011. The current 8-hour and 1-hour averages are not to be exceeded more than once per year.
- 2. The new lead (Pb) standard was promulgated October 2008. the rolling 3-month average is not to be exceeded.
- 3. The new nitrogen dioxide (NO₂) standard was promulgated in January 2010. The official level of the standard is 0.053 ppm, equal to 53 ppb, which is shown here for the purpose of clearer comparison to the 1-hour standard. The annual average is not to be exceeded. To attain the 1-hr standard, the 3-yearaverage of the 98th percentile of the daily maximum 1-hr average at each monitor within an area must not exceed 100 ppb.
- 4. The PM₁₀ standard is not to be exceeded more than once per year on average over 3 years.
- 5. The $PM_{2.5}$ standard was promulgated in September 2006, and a new standard is expected to be promulgated in October 2011. Until then, to attain the annual standard, the 3-year average of the weighted annual mean $PM_{2.5}$ concentrations from single or multiple community-oriented monitors must not exceed 15.0 μ g/m³. To attain the 24-hour standard, the 3-year average of the 98th percentile of 24-hour concentrations at each population-oriented monitor within an area must not exceed 35 μ g/m³.
- 6. USEPA plans on promulgating a new ozone (O_3) standard July 2011. Until then, to attain the 8-hour standard, the 3-year average of the fourth highest daily maximum 8-hour average ozone concentration measured at each monitor within an area over each year must not exceed 0.075 ppm. USEPA is also currently considering a secondary standard for ozone.
- 7. The new sulfur dioxide (SO_2) standard was promulgated June 2010. USEPA plans to revoke the annual and 24-hour maximums 1 year after designations for the 1-hour standard occur. Until then, the annual standard is not to be exceeded, and the 24-hour maximum is not to be exceeded more than once per year. To attain the 1-hour maximum, the 3-year average of the 99th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 75 ppb. The secondary standard is not to be exceeded more than once per year, and will remain in place until a new secondary standard is established.
- 8. To note, USEPA is reviewing the possibility of establishing a multi-pollutant secondary standard for nitrogen oxides (NO $_x$) and sulfur oxides (SO $_x$) together, which would be promulgated by March 2010. Until then, the existing secondary standards for NO $_2$ and SO $_2$ will remain in place.

- 1 Florida has a statewide air quality monitoring network that is operated by both state and local
- 2 environmental programs (FDEP, 2003). The air quality is monitored for carbon monoxide
- 3 (CO), lead (Pb), nitrogen dioxide (NO₂), ozone (O₃), particulate matter (PM), and sulfur dioxide
- 4 (SO₂). The monitors tend to be concentrated in areas with the largest population densities.
- 5 Not all pollutants are monitored in all areas. The air quality monitoring network is used to
- 6 identify areas where the ambient air quality standards are being violated and plans are
- 7 needed to reduce pollutant concentration levels to be in attainment with the standards. Also
- 8 included are areas where the ambient standards are being met, but plans are necessary to
- 9 ensure maintenance of acceptable levels of air quality in the face of anticipated population or
- industrial growth.
- 11 The end result of this attainment/maintenance analysis is the development of local and
- statewide strategies for controlling emissions of criteria air pollutants from stationary and
- mobile sources. The first step in this process is the annual compilation of the ambient air
- monitoring results, and the second step is the analysis of the monitoring data for general air
- 15 quality, exceedances of air quality standards, and pollutant trends.
- 16 The FDEP Northwest District operates monitors in several counties, including Bay, Escambia,
- Holmes, Leon, Santa Rosa, and Wakulla Counties. Over the years of record, there have been
- 18 exceedances (pollutant concentration greater than the numerical standard) of NAAQS.
- 19 However, there has not been a violation (occurrence of more exceedances of the standard
- than are allowed within a specified time period) of an ambient standard (FDEP, 2003).

21 **D.1.1 Project Calculations**

22 **D.1.1.1 Methodology**

- 23 Impacts to regional air quality are determined by comparing the project emissions with the
- 24 total emissions on a pollutant-by-pollutant basis for the ROI's 2008 National Emissions
- 25 Inventory (NEI) data. Potential impacts to air quality are evaluated with respect to the extent,
- 26 context, and intensity of the impact in relation to relevant regulations, guidelines, and
- 27 scientific documentation. The Council on Environmental Quality (CEQ) defines significance in
- terms of context and intensity in 40 CFR 1508.27. This requires that the significance of the
- action must be analyzed with respect to the setting of the Proposed Action and based relative
- to the severity of the impact. The CEQ National Environmental Policy Act (NEPA) Regulations
- (40 CFR 1508.27(b)) provide 10 key factors to consider in determining an impact's intensity.
- To provide a conservative evaluation, the impacts screening in this analysis used more
- 33 restrictive criteria than are required under other regulations. Rather than comparing
- 34 emissions from construction activities with regional inventories, emissions were compared to
- 35 the individual counties potentially impacted, which is a smaller area.
- The Air Conformity Applicability Model (ACAM) version 4.4.5 was utilized to calculate grading
- activities by providing user inputs for each. The ACAM calculations were augmented by
- emissions calculations of aircraft, munitions, and vehicle (land and water craft) emissions
- 39 completed in Microsoft Excel.

D.1.1.1.1 Construction Emissions

- 2 Calculations for construction emissions were completed using the calculation methodologies
- described in the U.S. Air Force ACAM. As previously indicated, a conformity determination is
- 4 not required since Okaloosa County is designated as attainment.
- 5 The ACAM was used to provide a level of consistency with respect to emissions factors and
- 6 calculations. The ACAM evaluates the individual emissions from different sources associated
- 7 with the construction phases. Phase I is the site preparation phase and Phase II is the actual
- 8 building/facility construction phase. These sources include grading activities, asphalt paving,
- 9 construction worker trips, stationary equipment (such as saws and generators), nonresidential
- architectural coatings, and mobile equipment emissions (U.S. Air Force, 2003).
- 11 Airstrip expansion and clearing around airstrips would require land clearing activities. It was
- assumed 60,000 square feet (ft²) would be required for airstrip expansion, with 500 feet on
- each side of the airstrips. Based on these assumptions, the construction emissions were
- calculated using the methodology expressed below.

D.1.1.1.2 Grading Activities

- 16 Grading activities are divided into grading equipment emissions and grading operations
- 17 emissions.

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- 18 Grading equipment emissions are combustive emissions from equipment engines and are
- 19 calculated in the following manner:

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VOC = 0.22 (lb/acre/day) * acres * DPY_1/2,000
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 $NO_x = 2.07 (lb/acre/day) * acres * DPY_1/2,000$

 $PM_{10} = 0.17 (lb/acre/day) * acres * DPY_{1}/2,000$

 $CO = 0.55 (lb/acre/day) * acres * DPY_1/2,000$

 $SO_2 = 0.21$ (lb/acre/day) * acres * DPY₁/2,000

25 Where

acres = number of gross acres to be graded during Phase I construction

DPY₁ = number of days per year used for grading during Phase I construction

2,000 = conversion factor from pounds to tons

lb = pounds

 $NO_x = nitrogen oxides$

 PM_{10} = particulate matter with diameter less than or equal to 10 micrometers

VOC = volatile organic compound

- 34 All emissions are represented as tons per year.
- 35 Grading operations emissions are fugitive dust and tiny soil particles distributed into the air
- through ground disturbance and are calculated using a similar equation from the Sacramento

- 1 Air Quality Management District (SAQMD) and South Coast Air Quality Management District
- 2 (SCAQMD) (U.S. Air Force, 2003). This calculation includes grading and truck hauling
- 3 emissions.
- 4 Emissions calculation:
- 5 PM_{10} (tons/yr) =60.7 (lb/acre/day) * acres * DPY₁/2,000
- 6 Where

- 7 acres = number of gross acres to be graded during Phase I construction
- $PY_1 = number of days per year used for grading during Phase I construction$
- 9 2,000 = conversion factor from pounds to tons
- yr = year
- 11 The calculations assumed that there were no controls used to reduce fugitive emissions. Also,
- it was assumed that construction activities would occur within calendar year (CY) 2009
- through CY 2017 (2,922 days), and that grading activities would represent 10 percent of that
- total, or 292 days. Construction activities not already approved in the Final Environmental
- 15 Impact Statement Record of Decision (ROD) were assumed to begin in quarter three of
- 16 CY 2011 and continue through CY 2017 (2,008 days). The emissions factors were derived from
- the SAQMD and SCAQMD (U.S. Air Force, 2003).

D.1.1.1.3 Stationary and Mobile Equipment

- 19 Emissions from generators for mobile emitters were calculated assuming six hours of
- 20 operation per event, five events per week and five sites operating simultaneously. It was
- assumed a diesel generator would be used. Off-road vehicles (all-terrain vehicles [ATVs],
- motorcycles, and high-mobility multipurpose wheeled vehicles [HMMWV, "humvees"]) and
- watercraft emissions are calculated. The number of hours of operation varies based on the
- 24 activity. Detailed information is provided in Chapter 2 for each activity type.
- 25 Each activity has the potential to use a mixture of vehicles. To determine air pollutant
- 26 emissions, calculations were completed for each vehicle type specified, assuming the total
- number of vehicles consisted of only that vehicle. The vehicle exhibiting the highest overall
- 28 emissions was chosen to represent vehicle emissions for that activity to be compared to the
- 29 ROI. Thus, emissions from any mixture of vehicles would have emissions less than or equal to
- 30 the emissions calculated.
- The following equation was used to calculate generator and off-road vehicle emissions:
- 32 EP = (EF * OT * LF/100 * hp/1,000 * N)/2,000
- 33 Where
- EP = pollutant emission (tons/yr)
- 35 EF = emission factor (lb/1,000 hp-hr)
- OT = operating time (hr)
- LF = load factor (%)
- 38 100 = convert percentage to decimal

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- 1 hp = horsepower of generator
- 2 2,000 = conversion factor from pounds to tons
- 3 hp-hr = horsepower-hours
- 4 hr = hours

D.1.1.1.4 Aircraft Emissions

- 6 Due to limited information, certain assumptions were made to develop the air quality
- 7 analysis. The aircraft emissions were calculated using the proposed operation tempo
- 8 outlined in Chapter 2. The sortie activities would involve CV-22, UH-60, HH-60, C-130, CH-47,
- 9 C-17, Cessna 172, C-145, PC-12, M-28, and Casa-212 aircraft.

Aircraft Flying Operations

- 11 Aircraft operations of concern are those that occur from ground level up to 3,000 feet above
- ground level (AGL). The 3,000-foot AGL ceiling was assumed as the atmospheric mixing
- height above which any pollutant generated would not contribute to increased pollutant
- 14 concentrations at ground level. The *aircraft operation of interest* within the mixing zone is the
- landing and takeoff (LTO) cycle. The LTO is characterized by five modes of operation:
- approach, taxi-in, taxi-out, takeoff, and climb-out. The Proposed Action and alternatives use
- aircraft and helicopters operating under the 3,000-foot AGL ceiling, therefore all time under
- the mixing height is included in the analysis.
- 19 The LTO cycle is the basis for calculating pollutant emissions. For each mode of operation
- during an LTO cycle, an aircraft engine operates at a specified power setting and for a specific
- period (time in mode). The pollutant emission rate is a function of the engine's operating
- 22 mode, the fuel flow rate, and the engine's overall efficiency. Emissions for one complete LTO
- 23 cycle for a particular aircraft are calculated by knowing the specific engine pollutant
- 24 emissions factors for each mode of operation.
- 25 The U.S. Air Force has developed emissions factors for aircraft engines. The table lists the
- various engine modes, time in for each mode, fuel flow, and corresponding pollutant
- emissions factors. Using these data, as well as information on activity levels (i.e., number of
- sorties/LTO operations), pollutant emissions for each aircraft were calculated. Aircraft flying
- operations were calculated in MS Excel using LTO cycles. As previously described, emissions
- 30 from engine exhaust occur for each operation during idle/taxi-out, takeoff, climb-out,
- approach, and taxi/idle-in (Table D-2). Only those portions of the flying operation that take
- 32 place below the atmospheric mixing height are considered (these are the only emissions
- presumed to affect ground-level concentrations).

Table D-2. Aircraft and Engine Mode

Aircraft Mode	Engine Mode
Taxi/idle-out	Idle
Takeoff	Military or afterburner
Climb-out	Intermediate
Approach	Approach
Taxi/idle-in	Idle

- Each activity required a different assortment of aircraft, in which any combination could be
- used. For the purposes of the air quality analysis, emissions were calculated assuming the

1 maximum number of aircraft and hours of operation. The aircraft that had the highest

2 emissions was used to compare to the ROI. The maximum number of aircraft, hours, and days

of operations that were outlined in Chapter 2 were used for the analysis of air pollutant

4 emissions per event and per year.

5 For example, for Light Aviation Proficiency Training (LAPT), four possible aircraft may be used

6 (Casa-212, PC-12, C-145, and/or M-28) for a total of four aircraft operating for two hours each,

7 five times per day. Emissions were calculated for all four aircraft types assuming that four

8 Casa-212 would be used, or four PC-12s. Once the emissions were calculated, the aircraft

9 exhibiting the highest emissions was chosen to represent the aircraft emissions for LAPT, with

the expectation that any combination of aircraft could be used and the emission levels would

be less than or equal to those shown in this analysis. Table D-3 shows the aircraft used for

each activity type in the air quality analysis.

Table D-3. Aircraft Used in Worst Case Scenario Air Quality Analysis

Activity	Aircraft
Light Aviation Proficiency Training (LAPT)	Casa-212
Low-Level Helicopter Insertions/Extractions (LLHI/E)	CH-47
Airdrops (AD)	C-17
Air/Land Vertical Lift (A/LVL)	CH-47
Forward Air Refueling Point/Hot Gas Operations (FARP/HGO)	CH-47
Overwater Hoist Operations (OHO)	CH-47
Hardened Camp Site Use (HCSU)	CH-47

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Emissions calculation based on aircraft flying operations:

 $EP = N * F * OPS * NUMEG * (\Sigma TIMi * EFi,p)/2,000)$

17 Where

N = number of aircraft

F = fraction of the year the aircraft operate

OPS = the number of operations [total LTOs and touch and go (TGOs)] per year for

each aircraft in the Proposed Action unit

TIMi = time in mode for aircraft operating mode, i, hours

The engine operating mode used in the emissions factors is correlated to the aircraft

24 operating mode as follows.

M = number of aircraft operating modes (five for LTOs; three for TGOs)

NUMEG = the number of engines for the aircraft type

EFi,p = emissions factor for pollutant, p, for each engine operating mode, i, lb/hr

2,000 = conversion from pounds to tons

29 Emissions were also calculated for aircraft flying below 3,000 feet AGL while completing

training operations. Using operation tables provided in Chapter 2, the amount of time an

aircraft is under 3,000 feet AGL in the ROI was determined for each of the aircraft types.

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D.1.1.1.5 Munition Emissions

- 2 Munition emissions for the Proposed Action and alternatives training operations were
- 3 calculated using the same methodology. For all munitions, emissions factors were used to
- 4 complete the analysis (<u>Table D-4</u>).
- 5 Emissions calculation:
- Pollutant Emissions = EF *Qty/2,000

- 7 Where
- pollutant emissions = emissions for the associated pollutant (i.e., CO or NO_x) (tons/yr)
- 9 EF = emissions factor for the pollutant (lb/item)
- 10 Qty = quantity (item/year)
- 11 2,000 = conversion from pounds to tons (1 ton = 2,000 pounds)

12 Table D-4. Munitions Emissions Factors

Emission Factor (lb/item) CO NO_x PM₁₀ PM_{2.5} SO₂ VOC CH₄ N_2O **Type** CO_2 5.56 mm Blank 0.000 0.000 0.000 0.000 0.000 NF 0.000 0.000 NF NF NF 7.62 mm Blank 0.001 0.000 0.000 0.000 0.000 0.001 0.000 NF **Ground Burst Simulators** 0.002 0.005 0.192 NF 0.000 0.000 0.003 NF NF M-18 Smoke Grenades 0.012 0.000 0.126 0.101 0.000 0.002 0.084 NF M-18 Smoke Grenades 0.004 0.000 NF NF 0.001 0.000 0.077 NF NF 0.006 0.000 0.122 0.000 0.001 0.077 NF NF M-18 Smoke Grenades 0.141 NF NF 0.014 0.000 0.116 0.103 0.000 0.001 0.043 M-18 Smoke Grenades

Source: USEPA, 2013

 CH_4 = methane; CO = carbon monoxide; CO_2 = carbon dioxide; ID = pounds; ID = millimeter; ID = nitrous oxide; ID = no factor given; ID = nitrogen oxides; ID = particulate matter with diameter less than or equal to 10 micrometers; ID = particulate matter with diameter less than or equal to 2.5 micrometers; ID = sulfur dioxide; ID = volatile organic compound

D.2 NATIONAL EMISSIONS INVENTORY

- 14 The NEI is operated under the USEPA's Emissions Factor and Inventory Group, which prepares
- the national database of air emissions information with input from numerous state and local
- air agencies, Tribes, and industries. The database contains information on stationary and
- 17 mobile sources that emit criteria air pollutants and hazardous air pollutants (HAPs). The
- database includes estimates of annual emissions, by source, of air pollutants in each area of
- 19 the country on a yearly basis. The NEI includes emissions estimates for all 50 states, the
- 20 District of Columbia, Puerto Rico, and the Virgin Islands. Emissions estimates for individual
- 21 point or major sources (facilities), as well as county-level estimates for area, mobile, and other
- sources, are currently from an extract of USEPA's NEI database. Data were extracted in
- 23 August 2005 (1999 emissions) and August 2008 (2002 emissions).

- 1 Criteria air pollutants are those for which the USEPA has set health-based standards. Four of the six criteria pollutants are included in the NEI database:
- 3 CO
- 4 NO_x
- 5 SO₂

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- PM₁₀ and particulate matter with diameter less than or equal to 2.5 micrometers (PM_{2.5})
- The NEI also includes emissions of VOCs, which are ozone precursors, emitted from motor vehicle fuel distribution and chemical manufacturing, as well as other solvent uses. VOCs react with NO_x in the atmosphere to form O_3 . The NEI database defines three classes of criteria air pollutant sources:
 - Point sources. Stationary sources of emissions, such as an electric power plant, that can be identified by name and location. A "major" source emits a threshold amount (or more) of at least one criteria pollutant and must be inventoried and reported. Many states also inventory and report stationary sources that emit amounts below the thresholds for each pollutant.
 - Area sources. Small point sources such as a home or office building or a diffuse stationary source such as wildfires or agricultural tilling. These sources do not individually produce sufficient emissions to qualify as point sources. Dry cleaners are one example; for instance, a single dry cleaner within an inventory area typically will not qualify as a point source, but collectively the emissions from all of the dry cleaning facilities in the inventory area may be significant and therefore must be included in the inventory.
 - *Mobile sources*. Any kind of vehicle or equipment with a gasoline or diesel engine (such as an airplane or ship).
- 25 The following are the main sources of criteria pollutant emissions data for the NEI:
- For electric generating units, USEPA's Emissions Tracking System/Continuous Emissions Monitoring Data and Department of Energy fuel use data.
 - For other large stationary sources, state data and older inventories where state data were not submitted.
- For on-road mobile sources, the Federal Highway Administration's estimate of vehicle miles traveled and emissions factors from USEPA's MOBILE Model.
- For non-road mobile sources, USEPA's NONROAD Model.
- For stationary area sources, state data, USEPA-developed estimates for some sources, and older inventories where state or USEPA data were not submitted.
- State and local environmental agencies supply most of the point source data. USEPA's Clean Air Market program supplies emissions data for electric power plants.

D.2.1 Greenhouse Gases

- 2 Greenhouse gases (GHGs) are chemical compounds in the Earth's atmosphere that trap heat.
- 3 Gases exhibiting greenhouse properties come from both natural and human sources. Water
- 4 vapor, carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O) are examples of GHGs
- 5 that have both natural and man-made sources, while other gases such as those used for
- 6 aerosols are exclusively man-made. In the U.S., GHG emissions come mostly from energy use.
- 7 These are driven largely by economic growth, fuel used for electricity generation, and
- 8 weather patterns affecting heating and cooling needs.
- 9 Typically, GHG emissions are represented as CO₂ equivalents (CO₂-e) based on the molecule's
- 10 global warming potential or ability to trap heat in the atmosphere relative to CO₂
- (USEPA, 2005). Therefore, all GHG emissions calculations and analysis in this document are
- 12 represented in CO₂-e.
- 13 The USEPA has recently promulgated several final regulations involving GHGs, either under
- the authority of the CAA, or as directed by Congress, but none of them apply directly to the
- 15 Proposed Action. However, Eglin AFB may be required to adjust their Title V Air Operating
- Permit under the Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring
- 17 Rule, 75 Federal Register (FR) 31514, 3 June 2010. Likewise, Eglin has already prepared a
- 18 Greenhouse Gas Baseline Emissions Inventory (U.S. Air Force, 2010a) and will be required to
- 19 report annual emissions to USEPA under Mandatory Reporting of Greenhouse Gases,
- 20 74 FR 56260, 30 October 2009. As an affected facility, Eglin has prepared a Greenhouse Gas
- 21 *Monitoring Plan* (U.S. Air Force, 2010b).
- 22 The potential effects of GHG emissions from the Proposed Action are by nature global. Given
- 23 the global nature of climate change and the current state of the science, it is not useful at this
- 24 time to attempt to link the emissions quantified for local actions to any specific climatological
- 25 change or resulting environmental impact. Nonetheless, the GHG emissions from the No
- Action Alternative and the Proposed Action and alternatives have been quantified to the
- 27 extent feasible in this Environmental Impact Statement (EIS) for information and comparative
- 28 purposes.

29 **D.2.1.1 GHG Construction Emissions**

- 30 Combustion of fossil fuels by construction equipment and constructions workers' vehicles
- during commutes to and from the site would contribute to increased GHG emissions.
- 32 Construction equipment emits approximately 22.2 pounds of CO₂ per gallon of diesel and
- worker vehicles emit 19.4 pounds of CO₂ per gallon of gasoline (USEPA, 2009b). These
- emission rates can be decreased with less idling and improved maintenance of equipment. It
- was assumed that construction vehicles would operate for approximately 1,248 hours
- annually. Of 250 potential working days, 62.5 percent (or 157 days) are suitable for
- 37 construction activities (i.e., no precipitation) (Sperling's Best Places, 2010). These vehicles
- were assumed to each combust 4 gallons of diesel per hour (Fusetti and Monahan, 2008).
- 39 Stationary sources for construction were also included in the analysis. It was assumed that a
- 40 number of small diesel-fueled generators would be operated during working hours. Each
- 41 generator was assumed to combust 1 gallon per hour of operation.

- 1 It was assumed that construction workers would be required to commute each day for
- 2 157 work days. ACAM estimates the average commute to be 15 miles one way, and 23.9 miles
- 3 per gallon average was assumed for commuter vehicles (USEPA, 2009b).

4 D.2.1.1.1 GHG Personnel Emissions

- 5 The addition of personnel to the region would also lead to increased GHG emissions. The two
- 6 primary sources for these GHG emissions would be mobile emissions from added personnel
- 7 commutes, and emissions in the home from personnel running home heating and cooling
- 8 and other electrical devices. Commuter emissions were calculated using the same
- 9 methodology as for the construction workers above. The USEPA estimates that in the U.S.,
- approximately 4 metric tons of CO₂-e are produced per person per year in the home
- 11 (USEPA, 2010b).

12 **D.2.1.1.2 GHG Operational Emissions**

- 13 Combustion of fuels during flight operations would also cause GHG emissions. Emissions
- were calculated using fuel flow rates for the respective aircraft. The emissions factor for jet
- 15 fuel (JP-8) is 22.1 pounds CO₂-e per gallon of fuel, respectively (U.S. Air Force, 2009).
- 16 Calculations were based on the estimated annual sorties for each aircraft under each
- alternative as discussed in Chapter 2 of the EIS.
- 18 GHG emissions from munitions use were calculated using emissions factors on a per item
- basis as outlined in AP-42 (USEPA, 2009a). Munitions to be used under each alternative as
- well as numbers for each munition type are listed in Chapter 2 of the EIS.

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APPENDIX E EARTH RESOURCES

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E. EARTH RESOURCES

E.1 SOILS SUMMARIES

E.1.1 Blackwater River State Forest Soils

Table E-1. Blackwater River State Forest Soils Summary

Soil						Tactical A	rea (acres)				
Taxonomy Class	Description	TA-1	TA-2	TA-3	TA-4	TA-5	TA-6	TA-7	TA-8	TA-9	Total
1 Entisols Soil Order	Entisols are soils that have little or no evidence of the development of soil horizons. Some of these soils are on steep, actively eroding slopes, and others are on floodplains or glacial outwash plains that receive frequent deposits of alluvium sediments. Entisols consist mostly of quartz or other minerals that are resistant to the weathering.	7,117	7,032	354	621	2,800	4,500	1,848	8,488	8,712	41,472
1A Aquents Soil Suborder	Aquents are stratified, nearly level, wet Entisol soils that formed in recent sandy sediments along stream floodplains, margins of lakes, and deltas of middle and low latitudes. Soil stratification results from sediment deposition caused by changing stream currents and shifting channels. In humid areas, these soils are extensive along large rivers. Water table levels generally fluctuate from near or above	6,711	3,778	0	0	2,374	2,646	575	2,450	164	18,698

Table E-1. Blackwater River State Forest Soils Summary, Cont'd

Soil		lable E-1.	Diackwat	er miver 5	tate i ores	Tactical Ar		iii u			
Taxonomy Class	Description	TA-1	TA-2	TA-3	TA-4	TA-5	TA-6	TA-7	TA-8	TA-9	Total
	the soil surface to about 40 inches below the soil surface.										
1A1 Soil Series	Bibb-Kinston Association, coal	se-loamy sand	, frequent flood	ding							
1B Psamments Soil Suborder	Psamments are the sandy Entisols that formed in poorly graded marine, eolian, or fluvial sand deposits on hillslope, knoll, ridge, and floodplain terraces, sand dunes, in cover sands, or in sandy parent materials. Soils formed in sandy sediments sorted by water are on outwash plains, lake plains, stream floodplains, marine terraces, natural levees, or beaches. Psamments are on surfaces of virtually any geologic formation from recent to Pliocene or older. These soils have a relatively low water-holding capacity, and the water table is typically deeper than 20 inches. Psamments that are bare and dry are subject to soil blowing and drifting and cannot easily support wheeled vehicles.	407	3,254	354	621	426	1,855	1,272	6,038	8,548	22,775
1B1 Soil Series	Chipley and Hurricane soils, sa percent slopes; Ortega, sand,						olus, loamy sai	nd, 0 to 5 perd	cent slopes; Fo	oxworth, sand,	0 to 5
2 Histisols Soil Order	Histisols are soils that formed in organic soil materials and are frequently referred to as mucks or peat soils. The primary source of organic matter is the decomposed plant materials					_	-				

Table E-1. Blackwater River State Forest Soils Summary, Cont'd

Soil		Table E-1.	Diackwat	er miver 5	aterores	Tactical A	<u> </u>	one a			
Taxonomy Class	Description	TA-1	TA-2	TA-3	TA-4	TA-5	TA-6	TA-7	TA-8	TA-9	Total
	that accumulate in water. These soils occur in floodplains, hardwood swamps, flatwoods depressions, and coastal bays and marshes. The poorly drained Histosols occur on level to nearly level slopes of less than 1 percent.										
2A Saprists Soil Suborder	Saprists are the wet Histosols in which the organic materials are well decomposed. They consist of the residue that remains after the aerobic decomposition of organic matter. Saprists occur in areas where the ground water table tends to fluctuate within the soils or in areas where the soils were aerobic during drier periods in the past.	30	77	229	18	22	0	617	222	969	2184
2A1 Soil Series	Dorovan, muck, frequent floodi	ng; Dorovan-F	Pamlico Assoc	iation, muck, fr	equent floodin	g					
3 Inceptisols Soil Order	Inceptisols are soils that have experienced some change in parent materials resulting in the leaching and accumulation of materials in subsurface layers or horizons. Inceptisols form mainly in loamy and clayey parent materials. This soil order includes a wide variety of soil types. These soils range from very poorly drained to excessively drained and frequently occur on level to gently undulating floodplain and marsh areas.										

Table E-1. Blackwater River State Forest Soils Summary, Cont'd

Soil		able L-1.				Tactical Ar					
Taxonomy Class	Description	TA-1	TA-2	TA-3	TA-4	TA-5	TA-6	TA-7	TA-8	TA-9	Total
	Many of these soils formed in late-Pleistocene glacial drift.										
3A Aquepts Soil Suborder	Aquepts are the wet Inceptisols that have poor to very poor natural drainage. If the soils have not been artificially drained, ground water is at or near the soil surface at some time during normal years but typically not at all seasons. Most Aquepts formed in late-Pleistocene or younger deposits in depressions, on nearly level plains, or floodplains.	6	99	5,243	1,974	9	0	2,017	54	582	9,984
3A1 Soil Series	Kinston, Johnston, and Bibb so	ils, coarse-loar	ny, frequent flo	ooding; Rutle	ge, fine sand, o	depressional, fr	requent floodin	g; Rutlege, loa	amy sand, freq	uent flooding	
4 Spodosols Soil Order	Spodosols are poorly drained, naturally infertile soils in which materials such as organic matter, aluminum, and/or iron have leached through the soil profile and accumulated in a lower layer in the soil profile, called a spodic horizon. The soil texture class of these soils is mostly sandy, sandy-skeletal, coarse-loamy, loamy-skeletal, or coarse silty and is black or red in appearance. In northwest Florida, they primarily occur in quartz-rich sands of acidic marine sediments with fluctuating ground water levels, which typically include flatwoods, depressions, stream										

Table E-1. Blackwater River State Forest Soils Summary, Cont'd

Soil		able E-1.				Tactical A					
Taxonomy Class	Description	TA-1	TA-2	TA-3	TA-4	TA-5	TA-6	TA-7	TA-8	TA-9	Total
	terraces, and tidal areas. Slopes typically range from 0 to 5 percent.										
4A Aquods Soil Suborder	Aquods are the Spodosols of wet regions that are generally characterized by a fluctuating, shallow water table. These soils have aquic conditions for some time in normal years in one or more horizons within 20 inches of the soil surface. Aquods formed in sandy materials of Pleistocene age.	0	0	0	0	5	0	0	0	0	5
4A1 Soil Series	Leon, sand, common flatwoods	soil, 0 to 2 pe	rcent								
5 Ultisols Soil Order	Ultisols are highly developed and leached soils in which clay has accumulated in a lower soil layer called the argillic horizon. Most surface layers have a sandy or loamy soil texture, and subsurface horizons typically have a loamy or clayey texture. They are mainly on Pleistocene or older surfaces. These excessively to poorly drained soils formed in loamy marine and alluvial deposits that occur on upland terraces, flats, ridges, hillslopes, drainways, depressions, and interstream divides that range from nearly level to slopes of 30 percent or greater	27,256	28,383	26,488	8,805	13,172	19,757	11,485	13,450	1,681	150,477

Table E-1. Blackwater River State Forest Soils Summary, Cont'd

Soil						Tactical A	rea (acres)				
Taxonomy Class	Description	TA-1	TA-2	TA-3	TA-4	TA-5	TA-6	TA-7	TA-8	TA-9	Total
5A Aquults Soil Suborder	Aquults are the Ultisols in wet areas where ground water is very close to the surface during part of each year, usually in winter and spring in middle latitudes, and is deep at another time. These gently sloping soils formed mainly in alluvium and marine deposits that are of Pleistocene age or older.	0	0	1,767	98	0	0	1,393	3	420	3,681
5A1 Soil Series		e soils, loamy,	occasional flo	oding							
5B Udults Soil Suborder	Udults are the more or less freely drained, humus-poor Ultisols that have a udic moisture regime. Some have a fragipan or plinthite, or both, in or below the argillic or kandic horizon. Udults developed in sediments and on surfaces that range from late Pleistocene to Pliocene or possibly older. Most of these soils have or had forest vegetation, but some have a savanna that probably is anthropic.	27,256	28,383	24,721	8,707	13,172	19,757	10,092	13,477	1,261	146,826
5B1 Soil Series	Albany, loamy sand, rare floodi percent; Bonifay, loamy sand, sandy loam, 0 to 8 percent slop Johns, fine sandy loam, 0 to 3 loamy sand, 0 to 8 percent slop sandy loam, 0 to 5 percent slop frequent flooding; Rains, sand percent slopes; Troup-Orange	0 to 8 percent bes; Escambia percent slopes bes; Lynchburg bes; Orangebu y loam, occasio	slopes; Bonifa , fine sandy lo ; Kalmia, loan g, fine sandy lo g, sandy loan onal flooding;	ay-Dothan-Ang am, 0 to 3 per ny fine sand, ra pam, 0 to 2 per n, 0 to 8 perce Tifton, sandy I	pie complex, 5 cent slopes; E are flooding, 2 cent slopes; M nt slopes; Par oam, 0 to 8 pe	to 12 percent s sto, loam, 2 to to 5 percent sl Maxton, loamy sey, fine sand	slopes; Dotha 8 percent slop opes; Leefield fine sand, rare y loam, 1 to 3	n, loamy sand, bes; Fuquay, I d-Stilson comp ely flooded, 2 to percent slopes	, 0 to 8 percent oamy sand, 0 lex, loamy, 0 to o 5 percent slo s; Pansey, sar	t slopes; Doth to 8 percent slo o 5 percent slo pes; Notcher, ndy loam, depr	an, fine opes; pes; Lucy, gravelly essional,

Sources: USDA, 2010; UDSA, 1995; USDA, 1980

Soil hydric rating: **Hydric** (blue); **Not Hydric** (green)

Flooding frequency: Frequent - > 50 times in 100 years; Occasional - >5 to 50 times in 100 years; Rare - 1 to 5 times in 100 years

Note: To convert acres to hectares, multiply by 0.4047; to convert inches to centimeters, multiply by 2.54.

E.1.2 Tate's Hell State Forest Soils

Table E-2. Tate's Hell State Forest Soils Summary

Soil					Та	ctical A	rea (acre	es)				
Taxonomy Class	Description	TA-1	TA-2	TA-3	TA-4	TA-5	TA-6	TA-7	TA-8	TA-9	TA-10	Total
1 Alfisols Soil Order	Alfisols are soils that have an ochric epipedon, an argillic horizon, and moderate to high base saturation and in which water is held at less than 1,500 kPa tension during at least 3 months each year. Alfisols frequently have fragipan, duripan, plinthite, or other restrictive soil layers that may result in perched water tables. Many Alfisols have aquic conditions.											
1A Aqualfs Soil Suborder	Aqualfs are Alfisols that have aquic conditions for some time in normal years at or near the surface. In some soils, ground water fluctuates from near the surface for most of the year then drops to greater depths. In others, the ground water may be deep most of the year, but restrictive soil layers limit the downward water movement, creating perched water tables. The wetness of a few Aqualfs is from seepage.	515	18,813	3,126	44	5,531	3,144	67	0	2,292	2,738	36,270
1A1 Soil Series	Elloree, Bibb, and Meggett soils, 0 to 3 percent slopes, sand, depressional; Meadowbrook, sand, 0 to 2 percer flooding; Tooles, sand, 0 to 1 percent slopes; Tooles-N	nt slopes; I	Meadowbro	ook, sand,	, slough, fre							
2 Entisols Soil Order	Entisols are soils that have little or no evidence of the development of soil horizons – most soils lack a subsoil. Some of these soils are on steep, actively eroding slopes, and others are on floodplains or glacial outwash plains that receive new deposits of alluvium at frequent intervals. Entisols consist mostly of quartz or other minerals that are resistant to the weathering needed to form horizons.	88	4,681	5,277	6,798	9,569	4,559	4,167	8,713	13,502	8,510	65,864
2A Aquents Soil Suborder	Aquents are stratified, nearly level, wet Entisol soils that formed in recent sandy sediments along stream floodplains, margins of lakes, and deltas of middle and low latitudes. Soil stratification results from sediment deposition caused by changing stream currents and shifting channels. In humid areas, these soils are extensive along large rivers. Water table levels generally fluctuate from near or above the soil surface to about 40 inches below the soil surface. Bohicket and Tisonia soils, tidal, frequent flooding; Cho	0	0	0	0	41	460	201	15	0	454	1171

Table E-2. Tate's Hell State Forest Soils Summary, Cont'd

Soil	Table E-2. Tate					ctical A						
Taxonomy Class	Description	TA-1	TA-2	TA-3	TA-4	TA-5	TA-6	TA-7	TA-8	TA-9	TA-10	Total
2B Psamments Soil Suborder	Psamments are the sandy Entisols that formed in poorly graded marine, eolian, or fluvial sand deposits on hillslope, knoll, ridge, and floodplain terraces, sand dunes, in cover sands, or in sandy parent materials. Soils formed in sandy sediments sorted by water are on outwash plains, lake plains, stream floodplains, marine terraces, natural levees, or beaches. Psamments are on surfaces of virtually any geologic formation from recent historic to Pliocene or older. These soils have a relatively low water-holding capacity and the water table is typically deeper than 20 inches. Psamments that are bare and dry are subject to soil blowing and drifting and cannot easily support wheeled vehicles.	88	4,681	5,277	6,798	9,528	4,100	3,966	8,697	13,502	8.056	56,645.056
2B1 Soil Series	Bonsai, mucky fine sand, frequent flooding; Corolla, sa occasional flooding; Kureb, fine sand, 3 to 8 percent slosand, 0 to 5 percent slopes; Scranton, fine sand, 0 to 2	opes; Osie	er, sand; C	ortega, fin	e sand, 0 to	5 percer	nt slopes;	Resota, f				
3 Histosols Soil Order	Histisols are soils that formed in organic soil materials and are frequently referred to as mucks or peat soils. The primary source of organic matter is the decomposed plant materials that accumulate in water. These soils occur in floodplains, hardwood swamps, flatwoods depressions, and coastal bays and marshes. The poorly drained Histosols occur on level to nearly level slopes of less than 1 percent.						_					
3A Saprists Soil Suborder	Saprists are the wet Histosols in which the organic materials are well decomposed. They consist of the residue that remains after the aerobic decomposition of organic matter. Saprists occur in areas where the ground water table tends to fluctuate within the soils or in areas where the soils were aerobic during drier periods in the past.	271	9	2,799	52	70	396	2,180	65	232	1,553	7,627
3A1 Soil Series	Dirego and Bayvi soils, tidal, frequent flooding; Doroval frequent flooding	n-Pamlico a	associatior	n, muck, fr	equent floo	oding; Ma	aurepas, n	nuck, freq	uent flood	ling; Paml	ico-Pickney	complex,
4 Inceptisols Soil Order	Inceptisols are soils that have experienced some change in parent materials resulting in the leaching and accumulation of materials in subsurface layers or horizons. Inceptisols form mainly in loamy and clayey parent materials. This soil order includes a wide variety of soil types. These soils range from very poorly drained to excessively drained and						_					

Table E-2. Tate's Hell State Forest Soils Summary, Cont'd

Soil					Ta	ctical A	rea (acre	es)				
Taxonomy Class	Description	TA-1	TA-2	TA-3	TA-4	TA-5	TA-6	TA-7	TA-8	TA-9	TA-10	Total
	frequently occur on level to gently undulating floodplain and marsh areas. Many of these soils formed in late-Pleistocene glacial drift. Soil textures range from sandy loams to silty clays.											
4A Aquepts Soil Suborder	Aquepts are wet Inceptisols that have poor to very poor natural drainage. If the soils have not been artificially drained, ground water is at or near the soil surface at some time during normal years but typically not at all seasons. Most Aquepts formed in late-Pleistocene or younger deposits in depressions, on nearly level plains, or on floodplains.	164	4,086	1,506	4,075	5,124	7,277	3,560	5,842	3,944	4,593	40,171
4A1 Soil Series	Pickney-Pamlico complex, depressional; Rutlege, fine Rutlege, Bibb, and Surrency soils, frequent flooding; To							ressional	; Rutlege,	loamy fin	e sand, dep	ressional;
5 Spodosols Soil Order	Spodosols are poorly drained, naturally infertile soils in which materials such as organic matter, aluminum, and/or iron have leached through the soil profile and accumulated in a lower layer in the soil profile called a spodic horizon. The soil texture class of these soils is mostly sandy, sandy-skeletal, coarse-loamy, loamy-skeletal, or coarse silty and is black or red in appearance. In northwest Florida, they primarily occur in quartz-rich sands of acidic marine sediments with fluctuating groundwater levels, which typically include flatwoods, depressions, stream terraces, and tidal areas. Slopes typically range from 0 to 5 percent.	1,013	1,851	966	1,612	4,727	1,247	3,203	979	933	5,381	21,912
5A Aquods Soil Suborder	Aquods are the Spodosols of wet regions that are generally characterized by a fluctuating, shallow water table. These soils have aquic conditions for some time in normal years in one or more horizons within 20 inches of the soil surface. Aquods formed in sandy materials of Pleistocene age.	1,010	1,829	927	1,612	4,727	1,244	2,901	977	814	4,278	20,319
5A1 Soil Series	Chaires, sand, 0 to 2 percent slopes; Leon, sand, 0 to 3 0 to 2 percent slopes	2 percent s	slopes; Lyr	nn Haven,	sand, 0 to	2 percent	t slopes;	Pottsburg	, sand, 0 t	o 2 percer	nt slopes; Sa	apelo, sand,
5B Orthods Soil Suborder	Orthods are relatively freely drained the Spodosols with a horizon accumulation containing aluminum, or aluminum and iron, and organic carbon. They formed predominantly in coarse, acid Pleistocene or Holocene deposits under mostly coniferous forest vegetation. If undisturbed, Orthods normally have an O, an albic, and a spodic horizon and may have a	3	21	40	0	0	4	302	2	118	1,103	1,593

Table E-2. Tate's Hell State Forest Soils Summary, Cont'd

Soil					Ta	ctical A	rea (acre	es)				
Taxonomy Class	Description	TA-1	TA-2	TA-3	TA-4	TA-5	TA-6	TA-7	TA-8	TA-9	TA-10	Total
	fragipan.											
5B1 Soil Series	Hurricane, sand, 0 to 3 percent slopes; Hurricane, Leon	n, and Alba	any soils, 0	to 4 perc	ent slopes;	Mandari	n, fine sar	nd, 0 to 3	percent sl	opes	•	
5 Ultisols Soil Order	Ultisols are highly developed and leached soils in which clay has accumulated in a lower soil layer called the argillic horizon. Most surface layers have a sandy or loamy soil texture, and subsurface horizons typically have a loamy or clayey texture. They are mainly on Pleistocene or older surfaces. These excessively to poorly drained soils formed in loamy marine and alluvial deposits that occur on upland terraces, flats, ridges, hillslopes, drainways, depressions, and interstream divides that range from nearly level to slopes of 30 percent or greater	12,765	1,814	234	12,204	4,121	123	121	931	126	0	32,439
5A Aquults Soil Suborder	Aquults are the Ultisols in wet areas where ground water is very close to the surface during part of each year, usually in winter and spring in middle latitudes, and is deep at another time. These gently sloping soils formed mainly in alluvium and marine deposits that are of Pleistocene age or older.	12,185	1,690	80	12,063	4,024	96	99	923	118	0	31,278
5A1 Soil Series	Lynchburg, loamy sand, 0 to 2 percent slopes; Plumme Pottsburg soils, 0 to 2 percent slopes; Surrency, fine sa percent slopes											
5B Udults Soil Suborder	Udults are the more or less freely drained, humus- poor Ultisols that have an udic moisture regime. Some have a fragipan or plinthite, or both, in or below the argillic or kandic horizon. Udults developed in sediments and on surfaces that range from late Pleistocene to Pliocene or possibly older. Most of these soils have or had forest vegetation, but some have a savanna that probably is anthropic.	580	124	155	141	96	27	23	9	8	0	1163
5B1 Soil Series	Albany, loamy sand, rare flooding, 0 to 5 percent slopes 5 percent slopes; Leefield, sand, 0 to 3 percent slopes; percent slopes											

Sources: USDA 2010, USDA 1994; kPa = kilopascals Soil hydric rating: **Hydric** (blue); **Not Hydric** (green)

Flooding frequency: Frequent - > 50 times in 100 years; Occasional - >5 to 50 times in 100 years; Rare - 1 to 5 times in 100 years

Note: To convert acres to hectares, multiply by 0.4047; inches to centimeters, multiply by 2.54

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F. CULTURAL RESOURCES

F.1 SURVEY REPORTS IN BLACKWATER STATE FOREST

Survey Reports in Blackwater State Forest							
Title	Publication Date	Author	ТА				
Blackwater River State Forest Well Survey	1977	Stoutamire, James W.	TA-2				
Archaeological Site Assessment Survey of the Cedar Creek RC&D Project	1978	Chance, Marsha A. and George Percy	TA-2				
A Cultural Resources Survey of the Zachary-Fort Lauderdale Pipeline Construction and Conversion Project: Alternate II/Florida	1980	Voellinger, Leonard and Melissa Voellinger	TA-4				
Cultural Resources Survey of Alabama Electric Cooperative Inc., Munson Substation, Blackwater River State Forest	1981	Clute, Janet R. T. and Nicholas Holmes					
Archaeological and Historical Survey of Two Proposed Borrow Pits	1977	Spillan, Herbert J. and Robert Williams	TA-3				
Cultural Resource Reconnaissance of the Baker- Beda Transmission Line, Okaloosa County, Florida and Covington County, Alabama	1981	Clute, Janet R. and Nicholas Holmes	TA-4				
Cultural resources reconnaissance Tenneco Oil Co. proposed drilling operations, Blackwater River State Forest, Okaloosa County, Florida.	1983	Dejarnette, David L.	TA-8				
Cultural resources survey of a proposed road and well pad, Santa Rosa County, Florida	1988	Thomas, Prentice M., Jr.	TA-2				
A Cultural Resources Investigation for the Yellow River Seismic Study: GIS Lines 1, 2 and 3A, Santa Rosa County, Florida. [Confidential per F. S. 377.2409; in BHP/CR]	1988	Mikell, Gregory A.	TA-8				
An Archaeological Survey of the Teledyne	1988	Mikell, Gregory	TA-7				

Survey Reports in Blackwater State Forest							
Title	Publication Date	Author	ТА				
Exploration Company Seismic Testing Lines DNR No. G-100-88, Blackwater State Forest, Santa Rosa and Okaloosa Counties. [Confidential per F. S. 377.2409; in BHP/CR]		A.					
Management summary, Phase I cultural resources survey, Eglin Air Force Base, Florida.	1983	New World Research, INC.	TA-9				
Cultural resources investigations at Eglin Air Force Base, Santa Rosa, Okaloosa and Walton Counties, Florida.	1984	New World Research, INC.	TA-9				
An archaeological survey of the proposed Tommy Steele Road Project, Okaloosa County, Florida.	1990	Thomas, Prentice M., Jr.	TA-3				
An archaeological survey of a proposed drill site in Blackwater State Forest, Santa Rosa County, Florida.	1990	Campbell, L. Janice and Prentice Thomas	TA-7				
Phase III Archaeological Survey of the Blackwater River Drainage	1991	Penton, Daniel T.	TA-6				
Historic Building Survey of Okaloosa County	1992	Bennett, Robert B., JR.	TA-8				
Archaeology and the Geographic Resource Analysis Support System: An Evaluation of a Soil Conservation Service Model of Archaeological Site Locations in Santa Rosa County, Florida	1992	McKenzie, C. Lee and John Phillips	TA-8				
Eglin Air Force Base, Historic Preservation Plan, Technical Synthesis of Cultural Resources Investigations at Eglin Santa Rosa, Okaloosa, and Walton Counties, Florida, Vol. 1: Text; Vol. 2, Technical Synthesis and Appendices; Vol. 3; Folios.	1993	Campbell, L. Janice and Prentice Thomas	TA-9				
Phase I Cultural Resources Investigation of Proposed Access Roads Within the Florida Portion of the Proposed Florida Gas Transmission Company Phase III Expanson Project Pipeline Corridor [Draft Report]	1994	Berkin, Jon, Bridget Donnelly and Peter Lambousy	TA-4				
Phase I C.R.I. of the 453.18 KM (281.60 MI) Florida	1993	Athens, William	TA-4				

Survey Reports in Blackwater State Forest								
Title	Publication Date	Author	ТА					
Portion on the Proposed F.G.T. Company Phase III Expansion Project Vol. I-II;Appe.I Site Maps, III's; Photo's; A.II, Vol.I Materials by FMSF No.;A.III, VOl.II Mt. by Rec.no.; App.III Site Forms		P., Charlotte Donald and Thomas Fenn						
A Cultural Resources Survey of the Lower Yellow River, Northwest Florida Water Management District Land in Okaloosa and Santa Rosa Counties, Florida	2000	Mikell, Gregory A.	TA-9					
Addendum Cultural Resource Assessment Survey/ Section 106 Review; Replacement Cellular Tower: Santa 17096-003-024; 11650 Munson Highway, Santa Rosa County, Florida	2002	PRACHT, JODI B.	TA-6					
Cultural Resources Survey of the Northwest Florida Water Management District Sand and Gravel Aquifer Test Site In Blackwater River State Forest, Okaloosa County, Florida	2003	Mikell, Gregory A.	TA-7					
Cultural Resource Assessment Survey of the Blackwater River State Forest Road Improvement Project	2004	Phillips, John C., and White, Sarah E.	TA-4					
Phase I Cultural Resources Survey of the Proposed 319 Waiver Requests, Blackwater River State Forest, Okaloosa County, Florida	2005	Phillips, John C. and Cindy Sommerkamp	TA-3					
An Archaeological and Historical Survey of the Wilderness Landing Project Area in Okaloosa County, Florida	2005	Quinn, Lisa N	TA-7					
Phase I Cultural Resources Survey of the Equestrian Trailhead in the Blackwater River State Forest, Santa Rosa County, Florida	2005	Phillips, John C. and Cindy Sommerkamp	TA-8					
Phase I Cultural Resources Survey of the Proposed Lawrence Cooley Road Paving Project in the Blackwater River State Forest Santa Rosa County, Florida	2005	Phillips, John C. and Cindy Sommerkamp	TA-5					
Blackwater River State Forest, Brooks Pit Expansion, Okaloosa County	2006	Cathey, Tom	TA-7					

Survey Reports in Blackwater State Forest							
Title	Publication Date	Author	ТА				
Phase I Cultural Resources Survey of the Proposed 2006 DEP 319 Grant Project in the Blackwater River State Forest Santa Rosa County, Florida	2005	Phillips, John C. and Cindy Sommerkamp	TA-5				
Sherman Kennedy Road Improvements at Panther Creek, Blackwater River State Forest	2007	White, Murray	TA-3				
Training Center Rd./N. end re-alignment, Blackwater River State Forest, Santa Rosa County	2007	White, Murray	TA-6				
New Blackwater Forestry Center septic field line installation, Blackwater River State Forest, Santa Rosa County	2007	Hill, Randy	TA-6				
Blackwater River State Park, Campground Renovation , Santa Rosa County	2009	Shaw, Marshall	TA-8				
Florida Gas Transmission Phase VIII First Addendum Report Related to Report Nos. 2008-07035 and 2008-07036	2009	Barse, William, Sean Coughlin and Emily Crowe	TA-4				
Archaeological Monitoring Results/Letter of Transmission Blackwater River State Forest Munson Borrow Pit	2009	Langston, Liz	TA-2				
Florida Gas Transmission Phase VIII Second Addendum Report Related to Report Nos. 2008- 07035 and 2008-07036 (Goodwin & Coughlin et al. 2010)	2010	Coughlin, Sean, Emily Crowe and Christopher Goodwin	TA-4				
Cultural Resource Investigations Conducted along Loops 3, 5, 10, and Greenfield 1 associated with the planned Florida Gas Transmission Company (FGT) Phase VIII Expansion project. Fourth Addendum Report Related to Report Nos. 2008-07035 and 2008-07036	2010	Coughlin, Sean, Emily Crowe and Christopher Goodwin	TA-4				
Phase I Cultural Resources Survey and Archaeological Inventory of Loops 2, 3, 4, 5, 6, and Greenfield 1 of the Florida Gas Transmission Company, LLC Phase VIII Expansion Project, Escambia, Santa Rosa, Okaloosa, Walton,	2008	R. Christopher Goodwin & Associates	TA-4				

Survey Reports in Blackwater State Forest							
Title	Publication Date	Author	ТА				
Washington, Bay, Calhoun, Jackson,							
Cultural Resource Assessment Survey Off-Highway Vehicle Trail Facilities Blackwater State Forest Santa Rosa County, Florida	2010	Archaeological Consultants, Inc.	TA-5				
Cultural Resource Assessment of a Segment of State Road 189, From State Road 4, in Baker, North Alabama State Line.	1994	Penton, Daniel T.	TA-4				
Cultural Resource Assessment of a Portion of State Road 4, From the Santa Rosa County Line to State Road 189 in Baker.	1995	Penton, Daniel T.	TA-3				
Treatment of Cultural Resources during a 3D Seismic Survey, by Fairways Exploration and Production, within Blackwater River State Forest, Florida	2011	Miller, James J. and Ross Morrell	TA-1				
Cultural Resource Survey for the Retrieval and Removal of Pre-Cut Submerged Timber in the Blackwater River, Santa Rosa and Okaloosa Counties, Application Number: 46-0311545-001-E1	2012	Cockrell, Wilburn A	TA-7				

F.2 ARCHAEOLOGICAL SITES IN BLACKWATER STATE FOREST

	Archaeological Sites in Blackwater State Forest						
ТА	Site #	Site Name	Site Description	NRHP Evaluation	Reference		
Training .	Training Area 1						
TA-1	SR00797	NN	Homestead, Twentieth century American, 1900-present	Ineligible for NRHP, Not Evaluated by SHPO	DHR Records, no reference provided		
TA-1	SR00815	NN	Artifact scatter-Deptford, 700 B.C300 B.C.	Ineligible for NRHP, Not Evaluated by SHPO	DHR Records, no reference provided		
TA-1	SR00816	NN	Middle Archaic Artifact scatter	Ineligible for NRHP, Not Evaluated by SHPO	DHR Records, no reference provided		
TA-1	SR00817	NN	Middle Archaic Single artifact or isolated find	Ineligible for NRHP, Not Evaluated by SHPO	DHR Records, no reference provided		
TA-1	SR00818	NN	Prehistoric isolated find	Ineligible for NRHP, Not Evaluated by SHPO	DHR Records, no reference provided		
TA-1	SR00865	LM90-12	Prehistoric	Ineligible for NRHP, Not Evaluated by SHPO	Penton, Daniel T., 1991. Phase III Archaeological Survey of the Blackwater River Drainage		
TA-1	SR00866	LM90-13	Prehistoric	Ineligible for NRHP, Not Evaluated by SHPO	Penton, Daniel T., 1991. Phase III Archaeological Survey of the Blackwater River Drainage		

	Archaeological Sites in Blackwater State Forest					
ТА	Site #	Site Name	Site Description	NRHP Evaluation	Reference	
TA-1	SR00868	LM90-15	Prehistoric	Ineligible for NRHP, Not Evaluated by SHPO	Penton, Daniel T., 1991. Phase III Archaeological Survey of the Blackwater River Drainage	
TA-1	SR00869	LM90-16	Prehistoric	Ineligible for NRHP, Not Evaluated by SHPO	Penton, Daniel T., 1991. Phase III Archaeological Survey of the Blackwater River Drainage	
TA-1	SR00870	LM90-17	Prehistoric	Ineligible for NRHP, Not Evaluated by SHPO	Penton, Daniel T., 1991. Phase III Archaeological Survey of the Blackwater River Drainage	
TA-1	SR00871	LM90-18	Agriculture/Farm structure, Twentieth century American, 1900- present	Ineligible for NRHP, Not Evaluated by SHPO	Penton, Daniel T., 1991. Phase III Archaeological Survey of the Blackwater River Drainage	
TA-1	SR00872	LM90-19	Prehistoric Variable density scatter of artifacts	Ineligible for NRHP, Not Evaluated by SHPO	DHR Records, no reference provided	
TA-1	SR00876	LM90-23	Prehistoric	Ineligible for NRHP, Not Evaluated by SHPO	Penton, Daniel T., 1991. Phase III Archaeological Survey of the Blackwater River Drainage	
TA-1	SR00885	LM90-32	Prehistoric	Ineligible for NRHP, Not Evaluated by	Penton, Daniel T., 1991. Phase III Archaeological	

	Archaeological Sites in Blackwater State Forest						
TA	Site #	Site Name	Site Description	NRHP Evaluation	Reference		
				SHPO	Survey of the Blackwater River Drainage		
TA-1	SR00886	LM90-33	Twentieth century American, 1900-present	Ineligible for NRHP, Not Evaluated by SHPO	Penton, Daniel T., 1991. Phase III Archaeological Survey of the Blackwater River Drainage		
TA-1	SR00887	LM90-34	Twentieth century American, 1900-present	Ineligible for NRHP, Not Evaluated by SHPO	Penton, Daniel T., 1991. Phase III Archaeological Survey of the Blackwater River Drainage		
TA-1	SR00888	LM90-35		Ineligible for NRHP, Not Evaluated by SHPO	Penton, Daniel T., 1991. Phase III Archaeological Survey of the Blackwater River Drainage		
TA-1	SR00889	LM90-36	Prehistoric	Ineligible for NRHP, Not Evaluated by SHPO	Penton, Daniel T., 1991. Phase III Archaeological Survey of the Blackwater River Drainage		
TA-1	SR00890	LM90-37	Prehistoric	Ineligible for NRHP, Not Evaluated by SHPO	Penton, Daniel T., 1991. Phase III Archaeological Survey of the Blackwater River Drainage		
TA-1	SR00903	LM90-50	Prehistoric	Ineligible for NRHP, Not Evaluated by SHPO	Penton, Daniel T., 1991. Phase III Archaeological Survey of the Blackwater River		

	Archaeological Sites in Blackwater State Forest				
ТА	Site #	Site Name	Site Description	NRHP Evaluation	Reference
					Drainage
TA-1	SR00906	LM90-53	Twentieth century American, 1900-present	Ineligible for NRHP, Not Evaluated by SHPO	Penton, Daniel T., 1991. Phase III Archaeological Survey of the Blackwater River Drainage
TA-1	SR01021	MCLELLAN TRANSECT 3	Single artifact or isolated find	Insufficient Information, Not Evaluated by SHPO	McKenzie, C. Lee and John Phillips, 1992. Archaeology and the Geographic Resource Analysis Support System: An Evaluation of a Soil Conservation Service Model of Archaeological Site Locations in Santa Rosa County, Florida
TA-1	SR01178	MCLELLAN TRANSECT 2	Single artifact or isolated find	Insufficient Information, Not Evaluated by SHPO	McKenzie, C. Lee and John Phillips, 1992. Archaeology and the Geographic Resource Analysis Support System: An Evaluation of a Soil Conservation Service Model of Archaeological Site Locations in Santa Rosa County, Florida

	Archaeological Sites in Blackwater State Forest					
ТА	Site #	Site Name	Site Description	NRHP Evaluation	Reference	
TA-1	SR01196	LM91-3	Artifact scatter	Insufficient Information, Not Evaluated by SHPO	McKenzie, C. Lee and John Phillips, 1992. Archaeology and the Geographic Resource Analysis Support System: An Evaluation of a Soil Conservation Service Model of Archaeological Site Locations in Santa Rosa County, Florida	
TA-1	SR01197	LM92-2	Artifact scatter	Insufficient Information, Not Evaluated by SHPO	McKenzie, C. Lee and John Phillips, 1992. Archaeology and the Geographic Resource Analysis Support System: An Evaluation of a Soil Conservation Service Model of Archaeological Site Locations in Santa Rosa County, Florida	
TA-1	SR01198	LM92-3	Prehistoric Artifact scatter	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided	
TA-1	SR01199	GUM LANDING HAMMOCK 1	Single artifact or isolated find	Insufficient Information, Not Evaluated by SHPO	McKenzie, C. Lee and John Phillips, 1992. Archaeology and the Geographic Resource Analysis Support System:	

	Archaeological Sites in Blackwater State Forest				
ТА	Site #	Site Name	Site Description	NRHP Evaluation	Reference
					An Evaluation of a Soil Conservation Service Model of Archaeological Site Locations in Santa Rosa County, Florida
TA-1	SR01200	GUM LANDING HAMMOCK 2	Artifact scatter	Insufficient Information, Not Evaluated by SHPO	McKenzie, C. Lee and John Phillips, 1992. Archaeology and the Geographic Resource Analysis Support System: An Evaluation of a Soil Conservation Service Model of Archaeological Site Locations in Santa Rosa County, Florida
TA-1	SR01201	GUM LANDING HAMMOCK 3	Artifact scatter	Insufficient Information, Not Evaluated by SHPO	McKenzie, C. Lee and John Phillips, 1992. Archaeology and the Geographic Resource Analysis Support System: An Evaluation of a Soil Conservation Service Model of Archaeological Site Locations in Santa Rosa County, Florida
TA-1	SR01217	NN	Prehistoric Artifact Scatter	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided

	Archaeological Sites in Blackwater State Forest					
ТА	Site #	Site Name	Site Description	NRHP Evaluation	Reference	
TA-1	SR01221	NN	Prehistoric Artifact Scatter	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided	
TA-1	SR01222	NN	Prehistoric Artifact Scatter	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided	
TA-1	SR01226	BIG JUNIPER MILL	Grist mill, Twentieth century American, 1900- present	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided	
TA-1	SR01240	DIXON WASTEWAY	Nineteenth century American, 1821-1899	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided	
TA-1	SR01243	COLDWATER CREEK DAM	Grist mill, American, 1821-present	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided	
TA-1	SR01382	Dixon Creek Log Ditch	Nineteenth century American, 1821- 1899/Twentieth century American, 1900-present	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided	
Training A	Training Area 2					
TA-2	SR00242	NN	Agriculture/Farm structure	Not Evaluated by Recorder	DHR Records, no reference provided	

	Archaeological Sites in Blackwater State Forest					
ТА	Site #	Site Name	Site Description	NRHP Evaluation	Reference	
TA-2	SR00246	NN	Early Archaic Lithic scatter/quarry (prehistoric: no ceramics)	Not Evaluated by Recorder	Mikell, Gregory A., 1988. An Archaeological Survey of the Teledyne Exploration Company Seismic Testing Lines DNR No. G-100-88, Blackwater State Forest, Santa Rosa and Okaloosa Counties. [Confidential per F. S. 377.2409; in BHP/CR]	
TA-2	SR00247	NN	Artifact scatter-Woodland	Not Evaluated by Recorder	Mikell, Gregory A., 1988. An Archaeological Survey of the Teledyne Exploration Company Seismic Testing Lines DNR No. G-100-88, Blackwater State Forest, Santa Rosa and Okaloosa Counties. [Confidential per F. S. 377.2409; in BHP/CR]	
TA-2	SR00761	SWEETWATER CREEK 1	Lithic scatter/quarry (prehistoric: no ceramics)	Not Evaluated by Recorder	DHR Records, no reference provided	
TA-2	SR00789	NN	Artifact scatter-Archaic, 8500 B.C1000 B.C.	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided	

	Archaeological Sites in Blackwater State Forest					
ТА	Site #	Site Name	Site Description	NRHP Evaluation	Reference	
TA-2	SR00810	NN	Prehistoric lithics only, but not quarry	Ineligible for NRHP, Not Evaluated by SHPO	DHR Records, no reference provided	
TA-2	SR00811	NN	Prehistoric Artifact Scatter	Ineligible for NRHP, Not Evaluated by SHPO	DHR Records, no reference provided	
TA-2	SR00839	SWEETWATER CREEK MILL	Mill of unspecified function, Nineteenth century American, 1821- 1899	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided	
TA-2	SR00849	LONG BRANCH GV	Prehistoric Artifact Scatter	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided	
TA-2	SR00878	LM90-25	Prehistoric	Ineligible for NRHP, Not Evaluated by SHPO	Penton, Daniel T., 1991. Phase III Archaeological Survey of the Blackwater River Drainage	
TA-2	SR00879	LM90-26	Prehistoric	Ineligible for NRHP, Not Evaluated by SHPO	Penton, Daniel T., 1991. Phase III Archaeological Survey of the Blackwater River Drainage	
TA-2	SR00880	LM90-27		Ineligible for NRHP, Not Evaluated by SHPO	Penton, Daniel T., 1991. Phase III Archaeological Survey of the Blackwater River Drainage	

	Archaeological Sites in Blackwater State Forest					
ТА	Site #	Site Name	Site Description	NRHP Evaluation	Reference	
TA-2	SR00881	LM90-28		Ineligible for NRHP, Not Evaluated by SHPO	Penton, Daniel T., 1991. Phase III Archaeological Survey of the Blackwater River Drainage	
TA-2	SR00882	LM90-29	Prehistoric Artifact scatter-with pottery	Ineligible for NRHP, Not Evaluated by SHPO	Penton, Daniel T., 1991. Phase III Archaeological Survey of the Blackwater River Drainage	
TA-2	SR00883	LM90-30		Ineligible for NRHP, Not Evaluated by SHPO	Penton, Daniel T., 1991. Phase III Archaeological Survey of the Blackwater River Drainage	
TA-2	SR00884	LM90-31	Farmstead, Twentieth century American, 1900-present	Ineligible for NRHP, Not Evaluated by SHPO	Penton, Daniel T., 1991. Phase III Archaeological Survey of the Blackwater River Drainage	
TA-2	SR00892	LM90-39	Prehistoric	Ineligible for NRHP, Not Evaluated by SHPO	Penton, Daniel T., 1991. Phase III Archaeological Survey of the Blackwater River Drainage	
TA-2	SR00893	LM90-40	Prehistoric	Ineligible for NRHP, Not Evaluated by SHPO	Penton, Daniel T., 1991. Phase III Archaeological Survey of the Blackwater River Drainage	

	Archaeological Sites in Blackwater State Forest					
ТА	Site #	Site Name	Site Description	NRHP Evaluation	Reference	
TA-2	SR00894	LM90-41	Prehistoric	Ineligible for NRHP, Not Evaluated by SHPO	Penton, Daniel T., 1991. Phase III Archaeological Survey of the Blackwater River Drainage	
TA-2	SR00895	LM90-42	Prehistoric	Ineligible for NRHP, Not Evaluated by SHPO	Penton, Daniel T., 1991. Phase III Archaeological Survey of the Blackwater River Drainage	
TA-2	SR00896	LM90-43	Prehistoric isolated find	Ineligible for NRHP, Not Evaluated by SHPO	Penton, Daniel T., 1991. Phase III Archaeological Survey of the Blackwater River Drainage	
TA-2	SR00910	LM90-57	Prehistoric isolated find	Ineligible for NRHP, Not Evaluated by SHPO	Penton, Daniel T., 1991. Phase III Archaeological Survey of the Blackwater River Drainage	
TA-2	SR00919	LM90-73	Prehistoric	Ineligible for NRHP, Not Evaluated by SHPO	Penton, Daniel T., 1991. Phase III Archaeological Survey of the Blackwater River Drainage	
TA-2	SR00922	LM90-76	Twentieth century American, 1900-present	Ineligible for NRHP, Not Evaluated by SHPO	Penton, Daniel T., 1991. Phase III Archaeological Survey of the Blackwater River Drainage	

	Archaeological Sites in Blackwater State Forest						
ТА	Site #	Site Name	Site Description	NRHP Evaluation	Reference		
TA-2	SR00923	LM90-77	Prehistoric	Ineligible for NRHP, Not Evaluated by SHPO	Penton, Daniel T., 1991. Phase III Archaeological Survey of the Blackwater River Drainage		
TA-2	SR01215	NN	Prehistoric Single artifact or isolated find	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided		
TA-2	SR01227	REEDY CREEK DAM	Mill of unspecified function; American, 1821-present	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided		
TA-2	SR01231	COTTON'S CHOP MILL	Mill of unspecified function; American, 1821- present	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided		
Training	Area 3						
TA-3	OK00110	KENNEDY BRIDGE	Campsite (prehistoric) with pottery	Not Evaluated by Recorder	DHR Records, no reference provided		
TA-3	OK00113	BURNHILL PLANTATION MILL	Mill of unspecified function, American, 1821- present	Not Evaluated by Recorder	DHR Records, no reference provided		
TA-3	OK00120	NORTH PANTHER CREEK	Weeden Island, A.D. 450- 1000	Not Evaluated by Recorder	DHR Records, no reference provided		
TA-3	OK00121	MIDDLE PANTHER CREEK	Weeden Island, A.D. 450- 1000	Not Evaluated by Recorder	DHR Records, no reference provided		

		Archaeol	ogical Sites in Blackwater Stat	te Forest	
ТА	Site #	Site Name	Site Description	NRHP Evaluation	Reference
TA-3	OK00122	MARE CREEK	Lithic scatter/quarry (prehistoric: no ceramics)	Not Evaluated by Recorder	DHR Records, no reference provided
TA-3	OK00123	LOWER PANTHER CREEK	Artifact scatter-Weeden Island, A.D. 450-1000	Not Evaluated by Recorder	DHR Records, no reference provided
TA-3	ОК00507	NN	Prehistoric Artifact Scatter	Not Evaluated by Recorder	White, Murray, 2007. Sherman Kennedy Road Improvements at Panther Creek, Blackwater River State Forest
TA-3	OK00508	NN	Prehistoric lithics only, but not quarry	Ineligible for NRHP, Not Evaluated by SHPO	DHR Records, no reference provided
TA-3	OK00509	NN	Prehistoric Artifact Scatter	Ineligible for NRHP, Not Evaluated by SHPO	DHR Records, no reference provided
TA-3	OK00511	NN	Prehistoric lithics only, but not quarry	Ineligible for NRHP, Not Evaluated by SHPO	DHR Records, no reference provided
TA-3	OK00512	NN	Prehistoric Artifact Scatter	Ineligible for NRHP, Not Evaluated by SHPO	DHR Records, no reference provided
TA-3	OK00513	NN	Prehistoric Artifact Scatter	Ineligible for NRHP, Not Evaluated by SHPO	DHR Records, no reference provided
TA-3	OK00515	NN	Prehistoric lithics only, but not quarry	Ineligible for NRHP, Not	DHR Records, no reference provided

		Archae	ological Sites in Blackwater Sta	te Forest	
ТА	Site #	Site Name	Site Description	NRHP Evaluation	Reference
				Evaluated by SHPO	
TA-3	ОК00526	LM90-58	Prehistoric	Ineligible for NRHP, Not Evaluated by SHPO	Penton, Daniel T., 1991. Phase III Archaeological Survey of the Blackwater River Drainage
TA-3	ОК00527	LM90-59	Prehistoric	Ineligible for NRHP, Not Evaluated by SHPO	Penton, Daniel T., 1991. Phase III Archaeological Survey of the Blackwater River Drainage
TA-3	OK00528	LM90-60	Prehistoric	Ineligible for NRHP, Not Evaluated by SHPO	Penton, Daniel T., 1991. Phase III Archaeological Survey of the Blackwater River Drainage
TA-3	ОК00529	LM90-61	Single artifact or isolated find, Prehistoric	Ineligible for NRHP, Not Evaluated by SHPO	Penton, Daniel T., 1991. Phase III Archaeological Survey of the Blackwater River Drainage
TA-3	ОК00530	LM90-62	Prehistoric Artifact Scatter	Ineligible for NRHP, Not Evaluated by SHPO	Penton, Daniel T., 1991. Phase III Archaeological Survey of the Blackwater River Drainage
TA-3	OK00541	LM 92-4	Artifact scatter	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided

	Archaeological Sites in Blackwater State Forest						
ТА	Site #	Site Name	Site Description	NRHP Evaluation	Reference		
TA-3	ОК00542	LM 92-516	Variable density scatter of artifacts; Early Archaic	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided		
TA-3	OK00543	LM 92-7	Artifact scatter	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided		
TA-3	OK00544	LM 92-8	Artifact scatter	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided		
TA-3	OK00545	LM 92-9/11	Artifact scatter	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided		
TA-3	OK00546	LM 92-10/12	Artifact scatter	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided		
TA-3	OK00547	LM 92-13	Artifact scatter	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided		
TA-3	ОК00548	LM 92-14	Artifact scatter	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided		

		Archaeolo	ogical Sites in Blackwater Stat	e Forest	
ТА	Site #	Site Name	Site Description	NRHP Evaluation	Reference
TA-3	ОК00550	LM 92-17	Variable density scatter of artifacts; Late Archaic/ Early Archaic	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided
TA-3	ОК00551	LM 92-18	Variable density scatter of artifacts; Early Archaic	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided
TA-3	ОК00552	LM 92-19	Artifact scatter	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided
TA-3	ОК00553	LM 92-20	Single artifact or isolated find	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided
TA-3	ОК00554	LM 92-21	Artifact scatter	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided
TA-3	ОК00559	LM 92-26	Artifact scatter	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided
TA-3	ОК00610	LM 92-46	Single artifact or isolated find	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided

		Archaeolo	gical Sites in Blackwater Stat	e Forest	
ТА	Site #	Site Name	Site Description	NRHP Evaluation	Reference
TA-3	OK00613	LEFT FIELD HAMMOCK	Variable density scatter of artifacts; Weeden Island, A.D. 450-1000	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided
TA-3	ОК00615	LM 92-51	Variable density scatter of artifacts	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided
TA-3	OK00616	LM 92-52	Artifact scatter	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided
TA-3	OK00617	LM 92-53	Single artifact or isolated find	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided
TA-3	OK00618	LM 92-54/55	Variable density scatter of artifacts	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided
TA-3	ОК00619	LM 92-56	Single artifact or isolated find	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided
TA-3	ОК00620	LM 92-58	Variable density scatter of artifacts	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided

	Archaeological Sites in Blackwater State Forest						
ТА	Site #	Site Name	Site Description	NRHP Evaluation	Reference		
TA-3	ОК00621	LM 92-59	Single artifact or isolated find	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided		
TA-3	ОК00622	LM 92-60	Artifact scatter	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided		
TA-3	ОК00624	LM 92-61	Variable density scatter of artifacts	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided		
TA-3	ОК00625	LM 92-62	Artifact scatter	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided		
TA-3	ОК00626	LM 92-63	Artifact scatter	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided		
TA-3	ОК00627	LM 92-64	Artifact scatter	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided		
TA-3	ОК00628	LM 92-65		Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided		

	Archaeological Sites in Blackwater State Forest						
TA	Site #	Site Name	Site Description	NRHP Evaluation	Reference		
TA-3	ОК00634	92-71	Artifact scatter	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided		
Training	Area 4						
TA-4	OK00118	WEST HORSE CREEK	Historic refuse / Dump, American, 1821-present	Not Evaluated by Recorder	DHR Records, no reference provided		
TA-4	ОК00119	EAST HORSE CREEK	Artifact scatter-Swift Creek, 300 B.C A.D.450/Weeden Island, A.D. 450-1000	Not Evaluated by Recorder	DHR Records, no reference provided		
TA-4	OK00566	LM 92-33	Artifact scatter	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided		
TA-4	ОК00567	LM 92-34	Single artifact or isolated find	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided		
TA-4	ОК00569	LM 92-36	Artifact scatter	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided		
TA-4	ОК00570	LM 92-37	Single artifact or isolated find	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided		

	Archaeological Sites in Blackwater State Forest					
ТА	Site #	Site Name	Site Description	NRHP Evaluation	Reference	
TA-4	OK00571	LM 92-38	Single artifact or isolated find	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided	
TA-4	OK00572	LM 92-39	Artifact scatter	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided	
TA-4	OK00573	LM 92-40	Artifact scatter	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided	
TA-4	OK00574	LM 92-41	Artifact scatter	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided	
TA-4	OK00575	LM 92-42	Single artifact or isolated find	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided	
TA-4	ОК00576	LM 92-43	Artifact scatter	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided	
TA-4	OK00577	LM 92-44	Artifact scatter	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided	

	Archaeological Sites in Blackwater State Forest						
TA	Site #	Site Name	Site Description	NRHP Evaluation	Reference		
TA-4	ОК00611	LM 92-47	Single artifact or isolated find	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided		
TA-4	ОК00629	LM 92-66	Artifact scatter	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided		
TA-4	ОК00630	LM 92-67	Artifact scatter	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided		
TA-4	ОК00633	LM 92-70	Artifact scatter	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided		
TA-4	OK00684	KARICK LAKE	Mill of unspecified function, Twentieth century American, 1900- present	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided		
Training	Area 5						
TA-5	SR00250	NN	Historic refuse / Dump, Twentieth century American, 1900-present	Not Evaluated by Recorder	Mikell, Gregory A., 1988. An Archaeological Survey of the Teledyne Exploration Company Seismic Testing Lines DNR No. G-100-88, Blackwater State Forest, Santa Rosa		

		Archaeol	ogical Sites in Blackwater Stat	te Forest	ı
TA	Site #	Site Name	Site Description	NRHP Evaluation	Reference
					and Okaloosa Counties. [Confidential per F. S. 377.2409; in BHP/CR]
TA-5	SR00813	NN	Prehistoric Single artifact or isolated find	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided
Training	Area 6	,			
TA-6	SR00762	SWEETWATER CREEK 2	Paleoindian, 10,000 B.C 8500 B.C., Single artifact or isolated find	Not Evaluated by Recorder	DHR Records, no reference provided
TA-6	SR00801	NN	Homestead, Twentieth century American, 1900- present	Ineligible for NRHP, Not Evaluated by SHPO	DHR Records, no reference provided
TA-6	SR00809	NN	Historic Artifact scatter	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided
TA-6	SR00813	NN	Prehistoric Single artifact or isolated find	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided
TA-6	SR00823	NN	Prehistoric Artifact Scatter, with pottery	Ineligible for NRHP, Not Evaluated by SHPO	DHR Records, no reference provided
TA-6	SR00824	NN	Prehistoric lithics only, but not quarry	Insufficient Information, Not	DHR Records, no reference provided

	1	Archae	ological Sites in Blackwater Sta	te Forest	,
TA	Site #	Site Name	Site Description	NRHP Evaluation	Reference
				Evaluated by SHPO	
TA-6	SR00825	NN	Prehistoric lithics only, but not quarry	Ineligible for NRHP, Not Evaluated by SHPO	DHR Records, no reference provided
TA-6	SR00826	NN	Single artifact or isolated find, Indeterminate	Ineligible for NRHP, Not Evaluated by SHPO	DHR Records, no reference provided
TA-6	SR00832	NN	Prehistoric Artifact Scatter	Ineligible for NRHP, Not Evaluated by SHPO	DHR Records, no reference provided
TA-6	SR00833	NN	Prehistoric Single artifact or isolated find	Ineligible for NRHP, Not Evaluated by SHPO	DHR Records, no reference provided
TA-6	SR00834	NN	Prehistoric Artifact Scatter	Ineligible for NRHP, Not Evaluated by SHPO	DHR Records, no reference provided
TA-6	SR00838	NN	Prehistoric Artifact Scatter	Ineligible for NRHP, Not Evaluated by SHPO	DHR Records, no reference provided
TA-6	SR00877	LM90-24	Prehistoric	Ineligible for NRHP, Not Evaluated by SHPO	Penton, Daniel T., 1991. Phase III Archaeological Survey of the Blackwater River Drainage
TA-6	SR00897	LM90-44	Prehistoric	Ineligible for NRHP, Not	Penton, Daniel T., 1991. Phase III

	Archaeological Sites in Blackwater State Forest						
ТА	Site #	Site Name	Site Description	NRHP Evaluation	Reference		
				Evaluated by SHPO	Archaeological Survey of the Blackwater River Drainage		
TA-6	SR00911	LM90-63	Prehistoric	Ineligible for NRHP, Not Evaluated by SHPO	Penton, Daniel T., 1991. Phase III Archaeological Survey of the Blackwater River Drainage		
TA-6	SR00912	LM90-64	Prehistoric isolated find	Ineligible for NRHP, Not Evaluated by SHPO	Penton, Daniel T., 1991. Phase III Archaeological Survey of the Blackwater River Drainage		
TA-6	SR00913	LM90-65	Prehistoric	Ineligible for NRHP, Not Evaluated by SHPO	Penton, Daniel T., 1991. Phase III Archaeological Survey of the Blackwater River Drainage		
TA-6	SR00915	LM90-67	Twentieth century American, 1900-present	Ineligible for NRHP, Not Evaluated by SHPO	Penton, Daniel T., 1991. Phase III Archaeological Survey of the Blackwater River Drainage		
TA-6	SR00918	LM90-72	Prehistoric	Ineligible for NRHP, Not Evaluated by SHPO	Penton, Daniel T., 1991. Phase III Archaeological Survey of the Blackwater River Drainage		

		Archaeolo	gical Sites in Blackwater Stat	e Forest	
TA	Site #	Site Name	Site Description	NRHP Evaluation	Reference
TA-6	SR01018	SPRINGHILL TRANSECT 3	Early Archaic Artifact scatter	Insufficient Information, Not Evaluated by SHPO	McKenzie, C. Lee and John Phillips, 1992. Archaeology and the Geographic Resource Analysis Support System: An Evaluation of a Soil Conservation Service Model of Archaeological Site Locations in Santa Rosa County, Florida
TA-6	SR01019	SPRINGHILL TRANSECT	Weeden Island, A.D. 450- 1000 Single artifact or isolated find	Insufficient Information, Not Evaluated by SHPO	McKenzie, C. Lee and John Phillips, 1992. Archaeology and the Geographic Resource Analysis Support System: An Evaluation of a Soil Conservation Service Model of Archaeological Site Locations in Santa Rosa County, Florida
TA-6	SR01307	SITCO #18	Prehistoric lacking pottery	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided
TA-6	SR01308	SITCO #19	Prehistoric lacking pottery	Ineligible for NRHP, Not Evaluated by SHPO	DHR Records, no reference provided
Training <i>i</i>	Area 7				

		Archaeolo	gical Sites in Blackwater Stat	e Forest	
ТА	Site #	Site Name	Site Description	NRHP Evaluation	Reference
TA-7	OK00479	BOUNDARY LINE	Artifact scatter-Weeden Island, A.D. 450-1000	Not Evaluated by Recorder	Mikell, Gregory A., 1988. An Archaeological Survey of the Teledyne Exploration Company Seismic Testing Lines DNR No. G-100-88, Blackwater State Forest, Santa Rosa and Okaloosa Counties. [Confidential per F. S. 377.2409; in BHP/CR]
TA-7	OK00531	LM90-68	Prehistoric	Ineligible for NRHP, Not Evaluated by SHPO	Penton, Daniel T., 1991. Phase III Archaeological Survey of the Blackwater River Drainage
TA-7	OK00532	LM90-69	Prehistoric	Ineligible for NRHP, Not Evaluated by SHPO	Penton, Daniel T., 1991. Phase III Archaeological Survey of the Blackwater River Drainage
TA-7	OK00614	LM 92-50	Single artifact or isolated find	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided
TA-7	ОК00908	SITCO #23	Single artifact or isolated find, Prehistoric lacking pottery	Ineligible for NRHP, Not Evaluated by SHPO	DHR Records, no reference provided

		Archaeolo	ogical Sites in Blackwater Stat	e Forest	
ТА	Site #	Site Name	Site Description	NRHP Evaluation	Reference
TA-7	ОК00909	SITCO #24	Single artifact or isolated find, Prehistoric lacking pottery	Ineligible for NRHP, Not Evaluated by SHPO	DHR Records, no reference provided
TA-7	OK00910	SITCO #25	Prehistoric Artifact scatter	Ineligible for NRHP, Not Evaluated by SHPO	DHR Records, no reference provided
TA-7	OK00911	SITCO #26	Prehistoric Single artifact or isolated find	Ineligible for NRHP, Not Evaluated by SHPO	DHR Records, no reference provided
TA-7	OK00924	SITCO #33	Prehistoric Artifact Scatter lacking pottery	Ineligible for NRHP, Not Evaluated by SHPO	DHR Records, no reference provided
TA-7	OK00925	SITCO #34	Prehistoric Artifact Scatter lacking pottery	Ineligible for NRHP, Not Evaluated by SHPO	DHR Records, no reference provided
TA-7	OK00926	SITCO #35	Prehistoric Single artifact or isolated find	Ineligible for NRHP, Not Evaluated by SHPO	DHR Records, no reference provided
TA-7	SR00828	SITCO SURVEY 2	Campsite (prehistoric), lacking pottery	Ineligible for NRHP, Not Evaluated by SHPO	DHR Records, no reference provided
TA-7	SR00834	NN	Prehistoric Artifact Scatter	Ineligible for NRHP, Not Evaluated by SHPO	DHR Records, no reference provided
TA-7	SR00835	NN	Late Woodland/Middle Woodland Artifact scatter	Insufficient Information, Not	DHR Records, no reference provided

	Archaeological Sites in Blackwater State Forest						
ТА	Site #	Site Name	Site Description	NRHP Evaluation	Reference		
				Evaluated by SHPO			
TA-7	SR00836	NN	Prehistoric Artifact Scatter	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided		
TA-7	SR00837	NN	Prehistoric Artifact Scatter	Ineligible for NRHP, Not Evaluated by SHPO	DHR Records, no reference provided		
TA-7	SR00916	LM90-70	Swift Creek, Early	Not Evaluated by Recorder	Penton, Daniel T., 1991. Phase III Archaeological Survey of the Blackwater River Drainage		
TA-7	SR01233	ATES CREEK MILL	Grist mill, Nineteenth century American, 1821- 1899	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided		
TA-7	SR01298	SITCO #11	Nineteenth century American, 1821-1899	Ineligible for NRHP, Not Evaluated by SHPO	DHR Records, no reference provided		
TA-7	SR01339	DARRYL	Prehistoric	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided		
Training	g Area 8						
TA-8	OK00514	NN	Artifact scatter- Prehistoric with pottery	Insufficient Information,	DHR Records, no reference provided		

	Archaeological Sites in Blackwater State Forest					
ТА	Site #	Site Name	Site Description	NRHP Evaluation	Reference	
				Not Evaluated by SHPO		
TA-8	SR01915	SHOP	Building remains/Historic refuse / Dump, Twentieth century American, 1900- present	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided	
TA-8	SR00803	NN	Homestead, Nineteenth century American, 1821- 1899	Ineligible for NRHP, Not Evaluated by SHPO	DHR Records, no reference provided	
TA-8	SR00808	NN	Late Woodland artifact scatter	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided	
TA-8	SR00809	NN	Historic Artifact scatter	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided	
TA-8	SR00812	NN	Nineteenth century American, 1821- 1899/Prehistoric with pottery	Ineligible for NRHP, Not Evaluated by SHPO	DHR Records, no reference provided	
TA-8	SR00822	NN	Prehistoric Artifact Scatter	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided	
TA-8	SR00829	NN	Prehistoric Artifact Scatter	Ineligible for NRHP, Not Evaluated by SHPO	DHR Records, no reference provided	

	Archaeological Sites in Blackwater State Forest					
ТА	Site #	Site Name	Site Description	NRHP Evaluation	Reference	
TA-8	SR00927	BW3-D	Prehistoric	Ineligible for NRHP, Not Evaluated by SHPO	Penton, Daniel T., 1991. Phase III Archaeological Survey of the Blackwater River Drainage	
TA-8	SR01175	FLORIDALE TRANSECT 1	Artifact scatter	Insufficient Information, Not Evaluated by SHPO	McKenzie, C. Lee and John Phillips, 1992. Archaeology and the Geographic Resource Analysis Support System: An Evaluation of a Soil Conservation Service Model of Archaeological Site Locations in Santa Rosa County, Florida	
TA-8	SR01176	FLORIDALE TRANSECT 2A	Single artifact or isolated find	Insufficient Information, Not Evaluated by SHPO	McKenzie, C. Lee and John Phillips, 1992. Archaeology and the Geographic Resource Analysis Support System: An Evaluation of a Soil Conservation Service Model of Archaeological Site Locations in Santa Rosa County, Florida	
TA-8	SR01177	FLORIDALE TRANSECT 2B	Artifact scatter-low density (< 2 per sq meter)	Insufficient Information, Not Evaluated by SHPO	McKenzie, C. Lee and John Phillips, 1992. Archaeology and the Geographic Resource Analysis	

	Archaeological Sites in Blackwater State Forest					
ТА	Site #	Site Name	Site Description	NRHP Evaluation	Reference	
					Support System: An Evaluation of a Soil Conservation Service Model of Archaeological Site Locations in Santa Rosa County, Florida	
TA-8	SR01237	COON CAMP MILL	Grist mill, Twentieth century American, 1900-present	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided	
TA-8	SR01300	J5SR002	Prehistoric lacking pottery	Ineligible for NRHP, Not Evaluated by SHPO	DHR Records, no reference provided	
TA-8	SR01301	SITCO #12	Historic earthworks, Nineteenth century American, 1821-1899	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided	
TA-8	SR01306	SITCO #17	Prehistoric lacking pottery	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided	
TA-8	SR01338	WOLFTRAP BRANCH	Prehistoric	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided	
TA-8	SR01368	NN	Early Archaic	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided	

	Archaeological Sites in Blackwater State Forest							
ТА	Site #	Site Name	Site Description	NRHP Evaluation	Reference			
Training /	Training Area 9							
TA-9	OK01659	GUEST LAKE LANDING	Campsite (prehistoric)/ Ceramics	Ineligible for NRHP, Not Evaluated by SHPO	Mikell, Gregory A., 2000. A Cultural Resources Survey of the Lower Yellow River, Northwest Florida Water Management District Land in Okaloosa and Santa Rosa Counties, Florida			
TA-9	OK01660	FLORIDALE # 2	Campsite (prehistoric)/ Ceramics	Ineligible for NRHP, Not Evaluated by SHPO	Mikell, Gregory A., 2000. A Cultural Resources Survey of the Lower Yellow River, Northwest Florida Water Management District Land in Okaloosa and Santa Rosa Counties, Florida			
TA-9	OK01661	FLORIDALE # 3	Campsite (prehistoric)/ Ceramics	Ineligible for NRHP, Not Evaluated by SHPO	Mikell, Gregory A., 2000. A Cultural Resources Survey of the Lower Yellow River, Northwest Florida Water Management District Land in Okaloosa and Santa Rosa Counties, Florida			

		Archaeolo	gical Sites in Blackwater Stat	te Forest	
ТА	Site #	Site Name	Site Description	NRHP Evaluation	Reference
TA-9	SR01399	Julian Mill	American Acquisition/Territorial Developmt 1821-45	Insufficient Information, Not Evaluated by SHPO	DHR Records, no reference provided
TA-9	SR01501	Miller Bluff West	Weeden Island, A.D. 450- 1000	Insufficient Information, Not Evaluated by SHPO	Mikell, Gregory A., 2000. A Cultural Resources Survey of the Lower Yellow River, Northwest Florida Water Management District Land in Okaloosa and Santa Rosa Counties, Florida
TA-9	SR01502	Harold SE #2&3	Prehistoric with pottery	Insufficient Information, Not Evaluated by SHPO	Mikell, Gregory A., 2000. A Cultural Resources Survey of the Lower Yellow River, Northwest Florida Water Management District Land in Okaloosa and Santa Rosa Counties, Florida
TA-9	SR01503	West Pitts River Boat Ramp	Campsite (prehistoric)/ Twentieth century American, 1900-present	Insufficient Information, Not Evaluated by SHPO	Mikell, Gregory A., 2000. A Cultural Resources Survey of the Lower Yellow River, Northwest Florida Water Management District Land in Okaloosa and Santa Rosa

	Archaeological Sites in Blackwater State Forest						
ТА	Site #	Site Name	Site Description	NRHP Evaluation	Reference		
					Counties, Florida		

F.3 SURVEY REPORTS IN TATE'S HELL

Survey Reports in Tate's Hell						
Report Title	Publication Date	Authors	Training Area			
Archaeological and Historical Survey of Florida Power Corporation 250 KV Transmission Lines River Crossings	1976	Scarry. John F. and Robert Williams	6			
Cultural resource assessment survey of the Bob Holt Realty property near East Point, Florida.	1987	Horvath, Elizabeth A.	7			
Cultural resources assessment survey of proposed borrow pit of 110 acres located in T8S, R5W, Sections 7 and 8 in Franklin County, Florida.	1989	Browing, William D. and Melissa G. Wiedenfeld	7			
Archaelolgical Survey of the Proposed Langwood Industries Project Area Liberty County, Florida	1994	Weill, Lorna A. and Nancy White	6			
Cultural Resource Survey of the Proposed Southern Pine Plantation, GEA Job No. 96-015, Franklin County, Florida	1996	Weill, Lorna A. and Nancy White	8			
Archaeological Investigations of the 1994 Record Flood Impacts in the Apalachicola Valley, Northwest Florida	1996	White, Nancy Marie	7			
An Inventory and Assessment of Cultural Resources Within Tate's Hell State Forest, Franklin and Liberty Counties, Florida	1998	Lammers, Jonathan, Melissa Memory and Christine Newman	1, 5, 6, 7, 8, 9			
An Inventory and Assessment of Historical Resources within the Apalachicola River Wildlife and Environmental Area, Franklin and Gulf Counties,	1998	Lammers, Jonathan, Melissa Memory and Christine Newman	1, 7			

Survey Reports in Tate's Hell					
Report Title	Publication Date	Authors	Training Area		
Florida					
Apalachicola Valley Remote Areas Archaeological Survey, Northwest Florida (V. I The Survey and Sites Located)(V. II 8GU14; 8GU94)	1999	White, Nancy Marie	1,3,5,7		
Phase I Archaeological Investigations Former Camp Gordon Johnston Franklin County, Florida	2000	Hathaway, Susan, Sheila Kohring and J. Sanderson Stevens	2, 6, 8		
A Cultural Resource Assessment of the Tiner Telecommunications Tower in East Point, Franklin County, Florida	2003	Earnest, Tray G.	7		
Cellular Tower: Carrabelle 17096-003-024, 1684 Ken Cope Road, Carrabelle, Franklin County, Florida	2002	Pracht, Jodi B.	2,9		
A Cultural Resources Assessment of the Lanark Tower Site, Franklin County, Florida	2002	Keel, Frank	2		
Cingular Cellular Tower, US 98 & 319, Franklin County, Florida	2004	Wayne, Lucy B.	2		
A Cultural Resource Reconnaissance of the Bobby Cresap Property in Franklin County, Florida	2005	Earnest, Tray G.	5		
A Cultural Resource Reconnaissance of the Sanaullah Property in Franklin County, Florida	2005	Earnest, Tray G and Lindsay Parker	5		
A Cultural Resource Reconnaissance of the Rovner Property in Franklin County, Florida	2005	Earnest, Tray G and Lindsay Parker	7		
A Cultural Resource Reconnaissance of the Proposed Twin Lakes Residential Development, Franklin County, Florida	2005	Earnest, Samantha	5		
A Reconnaissance-Level Cultural Resources Assessment of the Jordan Bayou Preserve Project, Franklin County, Florida	2006	Hines, Barbara	7		
Cultural Resource Reconnaissance Survey Schneider Tract, Franklin County, Florida	2007	Archaeological Consultants, Inc.	7		

Survey Reports in Tate's Hell						
Report Title	Publication Date	Authors	Training Area			
A Cultural Resource Assessment of the Whiskey George Property in Franklin County, Florida	2008	Earnest, Tray G.	1, 5, 7			
Tates Hell State Forest, 5th Deep Well Site on THSF by NWFWMD, Franklin County	2008	Morse, David	8			
Carrabelle Historic Preservation Survey and Plan (Grant S0909)	2009	Brinkley, Wm. Gerald L., Beth LaCivita and Joel McEachin	5,7,9			
A Phase I Cultural Resources Assessment of Progress Energy's Tree Maintenance within the Apalachicola National Forest Existing Easement, Crawfordville Substation to the Apalachicola River, Franklin, Liberty, and Wakulla Counties, Florida	2010	Cremer, David E. and Barbara Hines	4,6			
Archaeological and Historical Resource Assessment of State Project No. 49010-1543, Work Program Item No. 3112665, Franklin County, Florida	1987	Browning, William D.	7			
Cultural Resource Reconnaissance Assessment of the Carrabelle-East Point Transmission Line Rebuild, Franklin County, Florida	2012	Carlson, Lisabeth	5,7			

F.4 ARCHAEOLOGICAL SITES IN TATE'S HELL

			Archaeological Sites	in Tate's Hell	
Tract #	Site Number	Site Name	Site Description	NRHP Evaluation	Reference
Trainin	g Area 1				
1	FR00827	USFS 90-3 APA/Buzzing Wires	Prehistoric Artifact scatter	Insufficient Information, Not evaluated by SHPO	Lammers, Memory and Newman, 1998. An Inventory and Assessment of Cultural Resources Within Tate's Hell State Forest, Franklin and Liberty Counties, Florida
Trainin	g Area 2				
2 and 5	FR00865	Oxbow Bluff	Prehistoric lithics	Insufficient Information, Not evaluated by SHPO	Lammers, Memory and Newman, 1998. An Inventory and Assessment of Cultural Resources Within Tate's Hell State Forest, Franklin and Liberty Counties, Florida
2 and 5	FR00866	Oyster Camp	Prehistoric Campsite; Twentieth century American, 1900-present	Insufficient Information, Not evaluated by SHPO	Lammers, Memory and Newman, 1998. An Inventory and Assessment of Cultural Resources Within Tate's Hell State Forest, Franklin and Liberty Counties, Florida
2	FR00920	Gator Creek Bridge	Bridge Remains; American, 1821-present	Not Evaluated by Recorder or SHPO	DHR Records, no reference provided
2 and 6	FR00931	Gully Branch	Historic	Not Evaluated by Recorder or SHPO	DHR Records, no reference provided
2	FR00935	Morgan Still	Historic	Not Evaluated by Recorder or SHPO	DHR Records, no reference provided
Trainin	g Area 3				
3	FR00872	Cinder Palace	Ceramic scatter; Deptford, 700 B.C300 B.C.; Weeden Island I	Insufficient Information, Not evaluated by SHPO	DHR Records, no reference provided
3	FR00927	Lewis Bluff Bridge Remains	Historic	Not Evaluated by Recorder or SHPO	DHR Records, no reference provided

	Archaeological Sites in Tate's Hell							
Tract #	Site Number	Site Name	Site Description	NRHP Evaluation	Reference			
3	FR00932	Rock Landing	Historic	Not Evaluated by Recorder or SHPO	DHR Records, no reference provided			
Trainin	g Area 5							
2 and 5	FR00865	Oxbow Bluff	Prehistoric lithics	Insufficient Information, Not evaluated by SHPO	Lammers, Memory and Newman, 1998. An Inventory and Assessment of Cultural Resources Within Tate's Hell State Forest, Franklin and Liberty Counties, Florida			
2 and 5	FR00866	Oyster Camp	Prehistoric Campsite; Twentieth century American, 1900-present	Insufficient Information, Not evaluated by SHPO	Lammers, Memory and Newman, 1998. An Inventory and Assessment of Cultural Resources Within Tate's Hell State Forest, Franklin and Liberty Counties, Florida			
5	FR00887	Burnt Bridge Dipping Vat	Other	Not Evaluated by Recorder or SHPO	DHR Records, no reference provided			
5	FR00924	Pope Place	Historic well	Not Evaluated by Recorder or SHPO	DHR Records, no reference provided			
5	FR00925	Parker Place	Historic	Not Evaluated by Recorder or SHPO	DHR Records, no reference provided			
5	FR00934	Dew Drop Inn	Historic	Not Evaluated by Recorder or SHPO	DHR Records, no reference provided			
Trainin	g Area 6							
6	FR00879	Harberson City Bridge	Bridge Remains; Twentieth century American, 1900- present	Insufficient Information, Not evaluated by SHPO	Lammers, Memory and Newman, 1998. An Inventory and Assessment of Cultural Resources Within Tate's Hell State Forest, Franklin and Liberty Counties, Florida			
6	FR00933	Squirrel Road Dipping Vat	Historic	Not Evaluated by Recorder or SHPO	DHR Records, no reference provided			

	Archaeological Sites in Tate's Hell				
Tract #	Site Number	Site Name	Site Description	NRHP Evaluation	Reference
2 and 6	FR00931	Gully Branch	Historic	Not Evaluated by Recorder or SHPO	DHR Records, no reference provided
Trainin	raining Area 8				
8	FR00751	Pitcher Plant	Lithic scatter/quarry (prehistoric: no ceramics)	Insufficient Information, Not evaluated by SHPO	Lammers, Memory and Newman, 1998. An Inventory and Assessment of Cultural Resources Within Tate's Hell State Forest, Franklin and Liberty Counties, Florida
8	FR00753	Whiskey George Creek	Prehistoric Campsite with pottery	Insufficient Information, Not evaluated by SHPO	Lammers, Memory and Newman, 1998. An Inventory and Assessment of Cultural Resources Within Tate's Hell State Forest, Franklin and Liberty Counties, Florida
8	FR00886	North Beverly	Historic town; Twentieth century American, 1900-present	Insufficient Information, Not evaluated by SHPO	Lammers, Memory and Newman, 1998. An Inventory and Assessment of Cultural Resources Within Tate's Hell State Forest, Franklin and Liberty Counties, Florida
8	FR00923	Buck Siding	Twentieth century American, 1900-present	Not Evaluated by Recorder or SHPO	Carlson, 2012. Cultural Resource Reconnaissance Assessment of the Carrabelle- East Point Transmission Line Rebuild, Franklin County, Florida
8	FR00926	Deep Creek Still	Twentieth century American, 1900-present	Not Evaluated by Recorder or SHPO	DHR Records, no reference provided
Trainin	g Area 10				
10	FR00007	Topsail Bluff	Prehistoric shell midden; Deptford, 700 B.C300 B.C.; Swift Creek, 300 B.C A.D.450; Island, A.D. 450- 1000; Ft. Walton, A.D. 1000- 1500	Insufficient Information, Not evaluated by SHPO	Lammers, Memory and Newman, 1998. An Inventory and Assessment of Cultural Resources Within Tate's Hell State Forest, Franklin and Liberty Counties, Florida

	Archaeological Sites in Tate's Hell				
Tract #	Site Number	Site Name	Site Description	NRHP Evaluation	Reference
10	FR00785	Dot's Landing	Prehistoric midden(s); Early Archaic Kirk; Deptford, 700 B.C300 B.C.; Weeden Island, A.D. 450-1000	Insufficient Information, Not evaluated by SHPO	Lammers, Memory and Newman, 1998. An Inventory and Assessment of Cultural Resources Within Tate's Hell State Forest, Franklin and Liberty Counties, Florida
10	FR00862	High Bluff Homestead	Historic well; Twentieth century American, 1900-present	Insufficient Information, Not evaluated by SHPO	Lammers, Memory and Newman, 1998. An Inventory and Assessment of Cultural Resources Within Tate's Hell State Forest, Franklin and Liberty Counties, Florida
10	FR00869	Turtle Kill	Prehistoric Artifact Scatter with pottery	Ineligible for NRHP, not evaluated by SHPO	Carlson, 2012. Cultural Resource Reconnaissance Assessment of the Carrabelle- East Point Transmission Line Rebuild, Franklin County, Florida
10	FR00870	John Allen Ridge	Ceramic scatter, Prehistoric shell scatter; Weeden Island, A.D. 450-1000	Insufficient Information, Not evaluated by SHPO	Lammers, Memory and Newman, 1998. An Inventory and Assessment of Cultural Resources Within Tate's Hell State Forest, Franklin and Liberty Counties, Florida
10	FR00871	Powerline Ridge	Prehistoric Artifact scatter	Ineligible for NRHP, not evaluated by SHPO	Carlson, 2012. Cultural Resource Reconnaissance Assessment of the Carrabelle- East Point Transmission Line Rebuild, Franklin County, Florida
10	FR00874	Apiary Point	Prehistoric Lithic scatter	Insufficient Information, Not evaluated by SHPO	Lammers, Memory and Newman, 1998. An Inventory and Assessment of Cultural Resources Within Tate's Hell State Forest, Franklin and Liberty Counties, Florida
10	FR00875	Laura's Cattle Dip	Twentieth century American, 1900-present	Not Evaluated by Recorder or SHPO	DHR Records, no reference provided
10	FR00880	Airstrip	Prehistoric lithics	Preservation Not Recommended, not evaluated by SHPO	Lammers, Memory and Newman, 1998. An Inventory and Assessment of Cultural Resources Within Tate's Hell

	Archaeological Sites in Tate's Hell					
Tract #	Site Number	Site Name	Site Description	NRHP Evaluation	Reference	
					State Forest, Franklin and Liberty Counties, Florida	
10	FR00885	Pile of Cups	Turpentine camp; Deptford, 700 B.C300 B.C.; Twentieth century American, 1900-present	Insufficient Information, Not evaluated by SHPO	Lammers, Memory and Newman, 1998. An Inventory and Assessment of Cultural Resources Within Tate's Hell State Forest, Franklin and Liberty Counties, Florida	
10	FR00921	Sparky's Grave	Human Remains	Not Evaluated by Recorder or SHPO	DHR Records, no reference provided	
10	FR00930	Old School	Historic	Not Evaluated by Recorder or SHPO	DHR Records, no reference provided	

APPENDIX G NEPA DISCLOSURE STATEMENT

G. NEPA DISCLOSURE STATEMENT FOR THE GULF REGIONAL AIRSPACE STRATEGIC INITIATIVE (GRASI) LANDSCAPE INITIATIVE ENVIRONMENTAL IMPACT STATEMENT (W91278-12-D-0030-0005)

The Council on Environmental Quality (CEQ) Regulations at Title 40 of the *Code of Federal Regulations* (CFR) Section 1506.5(c), which have been adopted by the U.S. Air Force (32 CFR 989), require contractors and subcontractors who will prepare an environmental impact statement to execute a disclosure specifying that they have no financial or other interest in the outcome of the project.

"Financial or other interest in the outcome of the project" is defined as any direct financial benefit such as a promise of future construction or design work in the project, as well as indirect financial benefits the contractor is aware of.

In accordance with these requirements, the offeror and any proposed subcontractors hereby certify as follows, to the best of their actual knowledge as of the date set forth below:

- (a) \underline{X} Offeror and any proposed subcontractors have no financial or other interest in the outcome of the project.
- (b) ___ Offeror and any proposed subcontractor have the following financial or other interest in the outcome of the project and hereby agree to divest themselves of such interest prior to award of this contract, or agree to the attached plan to mitigate, neutralize or avoid any such conflict of interest.

Financial or Other Interests:

None

Certified by:	
PATRICIA L. GARCIA Name	
SR.CONTRACTS REPRESENTATIVE Title	
LEIDOS Company	
22 January 2014 Date	

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APPENDIX H NOISE

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H. NOISE

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- 2 Appendix H provides a general noise primer to
- 3 educate the reader on what constitutes noise, how it is measured, and the studies that were
- 4 used in support of how and why noise is modeled.
- 5 Noise is generally described as unwanted sound. Unwanted sound can be based on objective
- 6 effects (such as hearing loss or damage to structures) or subjective judgments (community
- annoyance). Noise analysis thus requires a combination of physical measurement of sound,
- 8 physical and physiological effects, plus psycho- and socio-acoustic effects.
- 9 Section <u>H.1</u> of this appendix describes how sound is measured and summarizes noise impacts
- in terms of community acceptability and land use compatibility. Section H.2 gives detailed
- descriptions of the effects of noise that lead to the impact guidelines presented in
- Section H.1. Section H.3 provides a description of the specific methods used to predict
- 13 aircraft noise.

H.1 NOISE DESCRIPTORS AND IMPACT

- 15 Aircraft operating in military airspace generate two types of sound. One is "subsonic" noise,
- which is continuous sound generated by the aircraft's engines and also by air flowing over the
- aircraft itself. The other is sonic booms (where authorized for supersonic), which are transient
- impulsive sounds generated during supersonic flight. These are quantified in different ways.
- Section H.1.1 describes the characteristics which are used to describe sound. Section H.1.2
- describes the specific noise metrics used for noise impact analysis. Section H.1.3 describes
- 21 how environmental impact and land use compatibility are judged in terms of these
- 22 quantities.

H.1.1 Quantifying Sound

- Measurement and perception of sound involve two basic physical characteristics: amplitude
- 25 and frequency. Amplitude is a measure of the strength of the sound and is directly measured
- in terms of the pressure of a sound wave. Because sound pressure varies in time, various
- 27 types of pressure averages are usually used. Frequency, commonly perceived as pitch, is the
- 28 number of times per second the sound causes air molecules to oscillate. Frequency is
- 29 measured in units of cycles per second, or hertz (Hz).
- 30 **Amplitude.** The loudest sounds the human ear can comfortably hear have acoustic energy
- one trillion times the acoustic energy of sounds the ear can barely detect. Because of this vast
- range, attempts to represent sound amplitude by pressure are generally unwieldy. Sound is,
- therefore, usually represented on a logarithmic scale with a unit called the decibel (dB).
- Sound measured on the decibel scale is referred to as a sound level. The threshold of human
- hearing is approximately 0 dB, and the threshold of discomfort or pain is around 120 dB.
- 36 Because of the logarithmic nature of the decibel scale, sounds levels do not add and subtract
- 37 directly and are somewhat cumbersome to handle mathematically. However, some simple

- rules of thumb are useful in dealing with sound levels. First, if a sound's intensity is doubled,
- the sound level increases by 3 dB, regardless of the initial sound level. Thus, for example:
- 60 dB + 60 dB = 63 dB, and
- 4 80 dB + 80 dB = 83 dB.
- 5 The total sound level produced by two sounds of different levels is usually only slightly more
- 6 than the higher of the two. For example:
- 7 60.0 dB + 70.0 dB = 70.4 dB.
- 8 Because the addition of sound levels behaves differently than that of ordinary numbers, such
- 9 addition is often referred to as "decibel addition" or "energy addition." The latter term arises
- from the fact that the combination of decibel values consists of first converting each decibel
- value to its corresponding acoustic energy, then adding the energies using the normal rules
- of addition, and finally converting the total energy back to its decibel equivalent.
- 13 The difference in dB between two sounds represents the ratio of the amplitudes of those two
- sounds. Because human senses tend to be proportional (i.e., detect whether one sound is
- twice as big as another) rather than absolute (i.e., detect whether one sound is a given
- number of pressure units bigger than another), the decibel scale correlates well with human
- 17 response.
- 18 Under laboratory conditions, differences in sound level of 1 dB can be detected by the human
- 19 ear. In the community, the smallest change in average noise level that can be detected is
- about 3 dB. A change in sound level of about 10 dB is usually perceived by the average
- 21 person as a doubling (or halving) of the sound's loudness, and this relation holds true for loud
- sounds and for guieter sounds. A decrease in sound level of 10 dB actually represents a 90
- 23 percent decrease in sound intensity but only a 50 percent decrease in perceived loudness
- because of the nonlinear response of the human ear (similar to most human senses).
- 25 The one exception to the exclusive use of levels, rather than physical pressure units, to
- 26 quantify sound is in the case of sonic booms. Sonic booms are coherent waves with specific
- 27 characteristics. There is a long-standing tradition of describing individual sonic booms by the
- amplitude of the shock waves, in pounds per square foot (psf). This is particularly relevant
- 29 when assessing structural effects as opposed to loudness or cumulative community response.
- In this environmental analysis, sonic booms are quantified by either dB or psf, as appropriate
- for the particular impact being assessed.
- 32 **Frequency.** The normal human ear can hear frequencies from about 20 Hz to about 20,000
- Hz. It is most sensitive to sounds in the 1,000 to 4,000 Hz range. When measuring community
- response to noise, it is common to adjust the frequency content of the measured sound to
- 35 correspond to the frequency sensitivity of the human ear. This adjustment is called A
- weighting (ANSI 1988). Sound levels that have been so adjusted are referred to as A weighted
- 37 sound levels.
- 38 The audible quality of high thrust engines in modern military combat aircraft can be
- 39 somewhat different than other aircraft, including (at high throttle settings) the characteristic
- 40 nonlinear crackle of high thrust engines. The spectral characteristics of various noises are
- accounted for by A-weighting, which approximates the response of the human ear but does

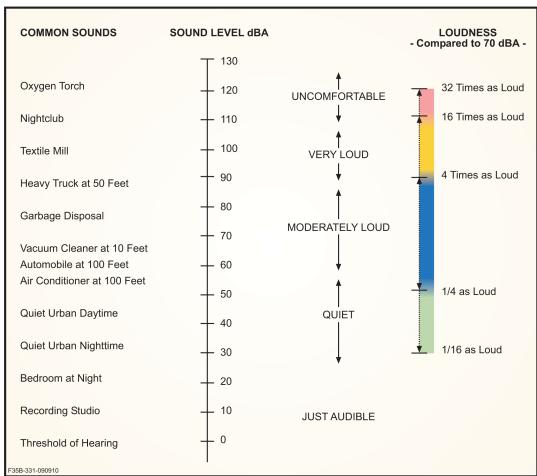
- not necessarily account for quality. There are other, more detailed, weighting factors that 1 have been applied to sounds. In the 1950s and 1960s, when noise from civilian jet aircraft 2 became an issue, substantial research was performed to determine what characteristics of jet 3 noise were a problem. The metrics Perceived Noise Level and Effective Perceived Noise Level 4 were developed. These accounted for nonlinear behavior of hearing and the importance of 5 low frequencies at high levels, and for many years airport/airbase noise contours were 6 presented in terms of Noise Exposure Forecast, which was based on Perceived Noise Level 7 and Effective Perceived Noise Level. In the 1970s, however, it was realized that the primary 8 9 intrusive aspect of aircraft noise was the high noise level, a factor which is well represented by A-weighted levels and day-night average sound level (DNL). The refinement of Perceived 10 Noise Level, Effective Perceived Noise Level, and Noise Exposure Forecast was not significant 11 in protecting the public from noise. 12
- There has been continuing research on noise metrics and the importance of sound quality, sponsored by the U.S. Department of Defense (DoD) for military aircraft noise and by the Federal Aviation Administration (FAA) for civil aircraft noise. The metric L_{dnmr}, which is described later and accounts for the increased annoyance of rapid onset rate of sound, is a product of this long-term research.
- The amplitude of A weighted sound levels is measured in dB. It is common for some noise analysts to denote the unit of A-weighted sounds by dBA. As long as the use of A-weighting is understood, there is no difference between dB or dBA: it is only important that the use of A-weighting be made clear. In this environmental analysis, A-weighted sound levels are reported as dB.
- A-weighting is appropriate for continuous sounds, which are perceived by the ear. Impulsive 23 sounds, such as sonic booms, are perceived by more than just the ear. When experienced 24 indoors, there can be secondary noise from rattling of the building. Vibrations may also be 25 felt. C-weighting (ANSI 1988) is applied to such sounds. This is a frequency weighting that is 26 27 relatively flat over the range of human hearing (about 20 Hz to 20,000 Hz) that rolls off above 5,000 Hz and below 50 Hz. In this study, C-weighted sound levels are used for the assessment 28 of sonic booms and other impulsive sounds. As with A-weighting, the unit is dB, but dBC is 29 sometimes used for clarity. In this study, sound levels are reported in both A-weighting and 30 C-weighting dBs, and C-weighted metrics are denoted when used. 31
- **Time Averaging.** Sound pressure of a continuous sound varies greatly with time, so it is 32 customary to deal with sound levels that represent averages over time. Levels presented as 33 instantaneous (i.e., as might be read from the display of a sound level meter) are based on 34 averages of sound energy over either 1/8 second (fast) or 1 second (slow). The formal 35 definitions of fast and slow levels are somewhat complex, with details that are important to 36 the makers and users of instrumentation. They may, however, be thought of as levels 37 corresponding to the root mean-square sound pressure measured over the 1/8-second or 38 1-second periods. 39
- The most common uses of the fast or slow sound level in environmental analysis is in the discussion of the maximum sound level that occurs from the action, and in discussions of typical sound levels. Figure H-1 is a chart of A-weighted sound levels from typical sounds. Some (air conditioner, vacuum cleaner) are continuous sounds whose levels are constant for some time. Some (automobile, heavy truck) are the maximum sound during a vehicle passby. Some (urban daytime, urban nighttime) are averages over some extended period. A variety

- of noise metrics have been developed to describe noise over different time periods. These
- 2 are described in Section H.1.2.

3 H.1.2 Noise Metrics

4 H.1.2.1 Maximum Sound Level

- 5 The highest A-weighted sound level measured during a single event in which the sound level
- 6 changes value as time goes on (e.g., an aircraft overflight) is called the maximum A-weighted
- 5 sound level or maximum sound level, for short. It is usually abbreviated by ALM, L_{max}, or L_{max}.
- 8 The maximum sound level is important in judging the interference caused by a noise event
- 9 with conversation, TV or radio listening, sleeping, or other common activities.



Source: Derived from the *Handbook of Noise Control*, Harris 1979, FICAN 1997.

Figure H-1. Typical A-Weighted Sound Levels of Common Sounds

H.1.2.2 Sound Exposure Level

- 13 Individual time-varying noise events have two main characteristics: a sound level that
- changes throughout the event and a period of time during which the event is heard.
- 15 Although the maximum sound level reached during the event provides some measure of the
- intrusiveness of the event, it alone does not completely describe the total event. The period

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11

- of time during which the sound is heard is also significant. The Sound Exposure Level
- 2 (abbreviated SEL or LAE for A weighted sounds) combines both of these characteristics into a
- 3 single metric.
- 4 SEL is a composite metric that represents both the intensity of a sound and its duration.
- 5 Mathematically, the mean square sound pressure is computed over the duration of the event,
- then multiplied by the duration in seconds, and the resultant product is turned into a sound
- 7 level. It does not directly represent the sound level heard at any given time, but rather
- 8 provides a measure of the net impact of the entire acoustic event. It has been well
- 9 established in the scientific community that SEL measures this impact much more reliably
- than just the maximum sound level. Because the SEL and the maximum sound level are both
- used to describe single events, there is sometimes confusion between the two, so the specific
- metric used should be clearly stated.
- SEL can be computed for C-weighted levels (appropriate for impulsive sounds), and the
- results denoted CSEL or L_{CE}. SEL for A-weighted sound is sometimes denoted ASEL. Within
- this study, SEL is used for A weighted sounds and CSEL for C-weighted.

16 **H.1.2.3 Equivalent Sound Level**

- For longer periods of time, total sound is represented by the equivalent continuous sound
- pressure level (L_{eq}). L_{eq} is the average sound level over some time period (often an hour or a
- day, but any explicit time span can be specified), with the averaging being done on the same
- 20 energy basis as used for SEL. SEL and Leq are closely related, with Leq being SEL over some
- 21 time period normalized by that time.
- Just as SEL has proven to be a good measure of the noise impact of a single event, Leg has
- been established to be a good measure of the impact of a series of events during a given time
- 24 period. Also, while Leg is defined as an average, it is effectively a sum over that time period
- and is, thus, a measure of the cumulative impact of noise.

26 H.1.2.4 Day-Night Average Sound Level

- Noise tends to be more intrusive at night than during the day. This effect is accounted for by
- applying a 10 dB penalty to events that occur after 10 pm and before 7 am. If Leg is computed
- over a 24-hour period with this nighttime penalty applied, the result is the DNL. DNL is the
- 30 community noise metric recommended by the U.S. Environmental Protection Agency (EPA)
- 31 (EPA 1974) and has been adopted by most Federal agencies (FICON 1992). It has been well
- 32 established that DNL correlates well with long-term community response to noise (Schultz
- 1978, Finegold et al. 1994). This correlation is presented in Section H.1.3 of this appendix.
- DNL accounts for the total, or cumulative, noise impact at a given location, and for this reason
- is often referred to as a "cumulative" metric. It was noted earlier that, for impulsive sounds,
- such as sonic booms, C-weighting is more appropriate than A weighting. DNL computed
- with C-weighting is denoted CDNL or L_{Cdn}. This procedure has been standardized, and impact
- interpretive criteria similar to those for DNL have been developed (CHABA 1981).

H.1.2.5 Onset-Adjusted Monthly Day–Night Average Sound Level

- 2 Aircraft operations in military training airspace generate a noise environment somewhat
- different from other community noise environments. Overflights are sporadic, occurring at
- 4 random times and varying from day to day and week to week. This situation differs from
- 5 most community noise environments, in which noise tends to be continuous or patterned.
- 6 Individual military overflight events also differ from typical community noise events in that
- 7 noise from a low-altitude, high-airspeed flyover can have a rather sudden onset.
- 8 To represent these differences, the conventional DNL metric is adjusted to account for the
- 9 "surprise" effect of the sudden onset of aircraft noise events on humans (Plotkin et al. 1987;
- Stusnick et al. 1992, 1993). For aircraft exhibiting a rate of increase in sound level (called
- onset rate) of from 15 to 150 dB per second, an adjustment or penalty ranging from 0 to 11 dB
- is added to the normal SEL. Onset rates above 150 dB per second require an 11 dB penalty,
- while onset rates below 15 dB per second require no adjustment. The DNL is then
- determined in the same manner as for conventional aircraft noise events and is designated as
- onset-rate adjusted day-night average sound level (abbreviated L_{dnmr}).
- 16 Because of the irregular occurrences of aircraft operations, the number of average daily
- operations is determined by using the calendar month with the highest number of
- operations. The monthly average is denoted L_{dnmr}. Noise levels are calculated the same way
- 19 for both DNL and L_{dnmr}. L_{dnmr} is interpreted by the same criteria as used for DNL.

20 H.1.2.6 Peak Noise Level

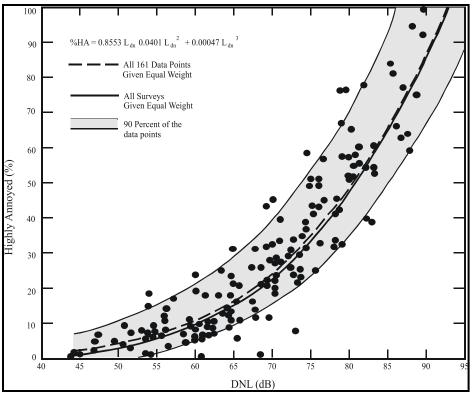
- 21 The peak noise level metric characterizes the strength of impulsive noise such as sonic boom
- 22 peak overpressure or munitions detonations. Peak noise level can be expressed in pounds per
- square foot (psf) or in decibel version (dB L_{pk}). The units psf are most often used when
- relating boom amplitude to human or animal response, although the direct physical pressure,
- as reflected by the unit (dB Lpk) is most commonly used when assessing effects on structures.
- 26 Peak noise levels are strongly affected by meteorological conditions such as humidity and
- temperature which vary over time. To account for the variability in peak noise levels due to
- meteorological effects, peak noise levels are generally specified as the level not exceeded for
- a certain percentage of the time. As an example, noise generated by detonation of a certain
- munitions type may exceed 115 dBP at a certain location only in the 15 percent of days with
- the most unfavorable meteorological conditions. The metric used to describe the peak noise
- level exceeding only 15 percent of the time is PK 15(met).

H.1.3 Noise Impact

33

H.1.3.1 Community Reaction

- 35 Studies of long-term community annoyance to numerous types of environmental noise show
- that DNL correlates well with the annoyance. Schultz (1978) showed a consistent relationship
- between DNL and annoyance. Shultz's original curve fit (Figure H-2) shows that there is a
- 38 remarkable consistency in results of attitudinal surveys which relate the percentages of
- 39 groups of people who express various degrees of annoyance when exposed to different DNL.



Source: Schultz 1978.

Figure H-2. Community Surveys of Noise Annoyance

Another study reaffirmed this relationship (Fidell et al. 1989). Figure H-3 shows an updated form of the curve fit (Finegold et al. 1994) in comparison with the original. The updated fit, which does not differ substantially from the original, is the current preferred form. In general, correlation coefficients of 0.85 to 0.95 are found between the percentages of groups of people highly annoyed and the level of average noise exposure. The correlation coefficients for the annoyance of individuals are relatively low, however, on the order of 0.5 or less. This is not surprising, considering the varying personal factors that influence the manner in which individuals react to noise. For example, individuals with autism are often very strongly affected by sudden noises (Tang et al. 2002). Persons with autism often report experiencing oversensitivity to noise and are often particularly sensitive to high-pitched or sudden onset noises (Grandin 1991). Nevertheless, findings substantiate that community annoyance to aircraft noise is represented quite reliably using DNL.

As noted earlier for SEL, DNL does not represent the sound level heard at any particular time, but rather represents the total sound exposure. DNL accounts for the sound level of individual noise events, the duration of those events, and the number of events. Its use is endorsed by the scientific community (ANSI 1980, 1988, 2005; EPA 1974; FICON 1992; FICUN 1980).

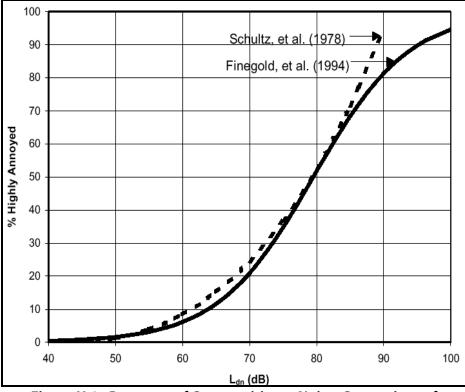


Figure H-3. Response of Communities to Noise; Comparison of Original (Schultz 1978) and Current (Finegold et al. 1994) Curve Fits

While DNL is the best metric for quantitatively assessing cumulative noise impact, it does not lend itself to intuitive interpretation by non-experts. Accordingly, it is common for environmental noise analyses to include other metrics for illustrative purposes. A general indication of the noise environment can be presented by noting the maximum sound levels which can occur and the number of times per day noise events will be loud enough to be heard. Use of other metrics as supplements to DNL has been endorsed by Federal agencies (FICON 1992).

The Schultz curve is generally applied to annual average DNL. In Section H.1.2, L_{dnmr} was described and presented as being appropriate for quantifying noise in military airspace. The Schultz curve is used with L_{dnmr} as the noise metric. L_{dnmr} is always equal to or greater than DNL, so impact is generally higher than would have been predicted if the onset rate and busiest-month adjustments were not accounted for.

There are several points of interest in the noise-annoyance relation. The first is DNL of 65 dB. This is a level most commonly used for noise planning purposes and represents a compromise between community impact and the need for activities like aviation which do cause noise. Areas exposed to DNL above 65 dB are generally not considered suitable for residential use. The second is DNL of 55 dB, which was identified by EPA as a level "...requisite to protect the public health and welfare with an adequate margin of safety," (EPA 1974) which is essentially a level below which adverse impact is not expected. The third is DNL of 75 dB. This is the lowest level at which adverse health effects could be credible (EPA 1974). The very high annoyance levels correlated with DNL of 75 dB make such areas unsuitable for residential land use.

- Sonic boom exposure is measured by C-weighting, with the corresponding cumulative metric
- being CDNL. Correlation between CDNL and annoyance has been established, based on
- 3 community reaction to impulsive sounds (CHABA 1981). Values of the C weighted equivalent
- 4 to the Schultz curve are different than that of the Schultz curve itself. <u>Table H-1</u> shows the
- 5 relation between annoyance, DNL, and CDNL.

Table H-1. Relation Between Annoyance, DNL and CDNL

DNL	% Highly Annoyed	CDNL
45	0.83	42
50	1.66	46
55	3.31	51
60	6.48	56
65	12.29	60
70	22.10	65

- 7 Interpretation of CDNL from impulsive noise is accomplished by using the CDNL versus
- 8 annoyance values in <u>Table H-1</u>. CDNL can be interpreted in terms of an "equivalent
- annoyance" DNL. For example, CDNL of 52, 61, and 69 dB are equivalent to DNL of 55, 65, and
- 75 dB, respectively. If both continuous and impulsive noise occurs in the same area, impacts
- 11 are assessed separately for each.

6

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H.1.3.2 Land Use Compatibility

- As noted above, the inherent variability between individuals makes it impossible to predict
- accurately how any individual will react to a given noise event. Nevertheless, when a
- 15 community is considered as a whole, its overall reaction to noise can be represented with a
- high degree of confidence. As described above, the best noise exposure metric for this
- 17 correlation is the DNL or L_{dnmr} for military overflights. Impulsive noise can be assessed by
- relating CDNL to an "equivalent annoyance" DNL, as outlined in Section H.1.3.1.
- In June 1980, an ad hoc Federal Interagency Committee on Urban Noise published guidelines
- 20 (FICUN 1980) relating DNL to compatible land uses. This committee was composed of
- representatives from DoD, Transportation, and Housing and Urban Development; EPA; and
- 22 the Veterans Administration. Since the issuance of these guidelines, Federal agencies have
- 23 generally adopted these guidelines for their noise analyses.
- 24 Following the lead of the committee, DoD and FAA adopted the concept of land-use
- 25 compatibility as the accepted measure of aircraft noise effect. The FAA included the
- committee's guidelines in the Federal Aviation Regulations (DOT 1984). These guidelines are
- 27 reprinted in Table H-2, along with the explanatory notes included in the regulation. Although
- these guidelines are not mandatory (note the footnote "*" in the table), they provide the best
- means for determining noise impact in airport communities. In general, residential land uses
- 29 Means for determining hoise impact in an port communities. In general, residential land uses
- normally are not compatible with outdoor DNL values above 65 dB, and the extent of land
- areas and populations exposed to DNL of 65 dB and higher provides the best means for
- 32 assessing the noise impacts of alternative aircraft actions. In some cases a change in noise
- level, rather than an absolute threshold, may be a more appropriate measure of impact.

Table H-2. Land Use Compatibility, Noise Exposure, and Accident Potential

	Table H-2. Land Use Compatibility, Noise Exposure, and Ac Accident Land Use Potential Zones		t	Noise Zones				
SLUCM No.	Name	Clear Zone	APZ I	APZ II	65-69 dB	70-74 dB	75-79 dB	80+ dB
10	Residential							
11	Household units							
11.11	Single units; detached	N	N	Y1	A ¹¹	B ¹¹	N	N
11.12	Single units; semidetached	N	N	N	A ¹¹	B ¹¹	N	N
11.13	Singe units; attached row	N	N	N	A ¹¹	B ¹¹	N	N
11.21	Two units; side-by-side	N	N	N	A ¹¹	B ¹¹	N	N
11.22	Two units; one above the other	N	N	N	A ¹¹	B ¹¹	N	N
11.31	Apartments; walk up	N	N	N	A ¹¹	B ¹¹	N	N
11.32	Apartments; elevator	N	N	N	A ¹¹	B ¹¹	N	N
12	Group quarters	N	N	N	A ¹¹	B ¹¹	N	N
13	Residential hotels	N	N	N	A ¹¹	B ¹¹	N	N
14	Mobile home parks or courts	N	N	N	N	N	N	N
15	Transient lodgings	N	N	N	A ¹¹	B ¹¹	C ¹¹	N
16	Other residential	N	N	N^1	A ¹¹	B ¹¹	N	N
20	Manufacturing	- -	-	-		=	-	
21	Food and kindred products; manufacturing	N	N ²	Υ	Υ	Y12	Y 13	Y 14
22	Textile mill products; manufacturing	N	N^2	Υ	Υ	Y12	Y ¹³	Y14
23	Apparel and other finished products made from fabrics, leather, and similar materials; manufacturing	N	N	N ²	Υ	Y12	Y 13	Y14
24	Lumber and wood products (except furniture); manufacturing	N	Y 2	Υ	Υ	Y 12	Υ13	Y14
25	Furniture and fixtures; manufacturing	N	Y 2	Υ	Υ	Y12	Y ¹³	Y14
26	Paper and allied products; manufacturing	N	Y 2	Υ	Υ	Y12	Y13	Y14
27	Printing, publishing, and allied industries	N	Y 2	Υ	Υ	Y12	Y13	Y14
28	Chemicals and allied products; manufacturing	N	N	N^2	Υ	Y12	Y13	Y14
29	Petroleum refining and related industries	N	N	N	Υ	Y12	Y13	Y14
30	Manufacturing							
31	Rubber and misc. plastic products, manufacturing	N	N ²	N ²	Υ	Y12	Y ¹³	Y14
32	Stone, clay and glass products; manufacturing	N	N ²	Υ	Υ	Y12	Y13	Y14
33	Primary metal industries	N	N ²	Υ	Υ	Y12	Y ¹³	Y14
34	Fabricated metal products; manufacturing	N	N^2	Υ	Υ	Y12	Y ¹³	Y14
35	Professional, scientific, and controlling instruments; photographic and optical goods; watches and clocks; manufacturing	N	N	N ²	Y	А	В	N
39	Miscellaneous manufacturing	N	Y 2	Y ²	Υ	Y12	Y ¹³	Y14

Table H-2. Land Use Compatibility, Noise Exposure, and Accident Potential, Cont'd

	Land Use Compatibility, Noise Ex	Accident Potential Zones			Noise Zones				
SLUCM No.	Name	Clear Zone	APZ I	APZ II	65-69 dB	70-74 dB	75-79 dB	80+ dB	
40	Transportation, communications, and utilities								
41	Railroad, rapid rail transit, and street railroad transportation	N^3	Y ⁴	Υ	Υ	Y ¹²	Y ¹³	Y ¹⁴	
42	Motor vehicle transportation	N ³	Υ	Υ	Υ	Y 12	Y 13	Y14	
43	Aircraft transportation	N ³	Y 4	Υ	Υ	Y 12	Y 13	Y14	
44	Marine craft transportation	N^3	Y 4	Υ	Υ	Y12	Y ¹³	Y14	
45	Highway and street right-of-way	N ³	Υ	Υ	Υ	Y 12	Y 13	Y14	
46	Automobile parking	N ³	Y 4	Υ	Υ	Y12	Υ13	Y14	
47	Communications	N ³	Y 4	Υ	Υ	A ¹⁵	B ¹⁵	N	
48	Utilities	N 3	Y 4	Υ	Υ	Υ	Y 12	Y13	
49	Other transportation communications and utilities	N ³	Y 4	Υ	Υ	A ¹⁵	B ¹⁵	N	
50	Trade								
51	Wholesale trade	N	Y 2	Υ	Υ	Y 12	Y 13	Y14	
52	Retail trade-building materials, hardware and farm equipment	N	Y ²	Υ	Υ	Y ¹²	Y ¹³	Y 14	
53	Retail trade-general merchandise	N ²	N ²	Υ2	Υ	Α	В	N	
54	Retail trade-food	N ²	N ²	Υ2	Υ	Α	В	N	
55	Retail trade-automotive, marine craft, aircraft and accessories	N ²	N ²	Y 2	Υ	Α	В	N	
56	Retail trade-apparel and accessories	N ²	N^2	Υ2	Υ	Α	В	N	
57	Retail trade-furniture, home furnishings and equipment	N ²	N ²	Υ2	Υ	Α	В	N	
58	Retail trade-eating and drinking establishments	N	N	N^2	Υ	Α	В	N	
59	Other retail trade	N	N^2	Υ2	Υ	Α	В	N	
60	Services				_		•		
61	Finance, insurance, and real estate services	N	N	Υ6	Υ	Α	В	N	
62	Personal services	N	N	Υ6	Υ	Α	В	N	
62.4	Cemeteries	N	Y 7	Y 7	Υ	Y 12	Y 13	Y14,2,1	
63	Business services	N	Y8	Υ8	Υ	Α	В	N	
64	Repair services	N	Y 2	Υ	Υ	Y12	Y ¹³	Y14	
65	Professional services	N	N	Y 6	Υ	Α	В	N	
65.1	Hospitals, nursing homes	N	N	N	A*	В*	N	N	
65.1	Other medical facilities	N	N	N	Υ	Α	В	N	
66	Contract construction services	N	Y 6	Υ	Υ	Α	В	N	
67	Governmental services	N ⁶	N	Y 6	Υ*	A*	В*	N	
68	Educational services	N	N	N	A*	В*	N	N	
69	Miscellaneous services	N	N ²	Υ2	Υ	Α	В	N	
70	Cultural, entertainment and recreational								
71	Cultural activities (including churches)	N	N	N ²	A*	В*	N	N	

Land Use		Accident Potential Zones			Noise Zones			
SLUCM No.			APZ I	APZ II	65-69 dB	70-74 dB	75-79 dB	80+ dB
71.2	Nature exhibits	N	Y ²	Υ	Y*	N	N	N
72	Public assembly	N	N	N	Υ	N	N	N
72.1	Auditoriums, concert halls	N	N	N	Α	В	N	N
72.11	Outdoor music shell, amphitheatres	N	N	N	N	N	N	N
72.2	Outdoor sports arenas, spectator sports	N	N	N	Y 17	Y 17	N	N
73	Amusements	N	N	Y8	Υ	Υ	N	N
74	Recreational activities (including golf courses, riding stables, water recreation)	ΝΥ	Y8,9,10	Υ	Y*	A*	B*	N
75	Resorts and group camps	N	N	N	Y*	Y*	N	N
76	Parks	N	Y8	Y8	Y*	Y*	N	N
79	Other cultural, entertainment, and recreation	N^9	Y ⁹	Y 9	Y*	Y*	N	N
80	Resources production and extraction							
81	Agriculture (except livestock)	Y ¹⁶	Υ	Υ	Y ¹⁸	Y 19	Y 20	Y 20,21
81.5 to 81.7	Livestock farming and animal breeding	N	Υ	Y	Y 18	Y 19	Y 20	Υ20,21
82	Agricultural related activities	N	Y 5	Υ	Y ¹⁸	Y ¹⁹	N	N
83	Forestry activities and related services	N^5	Υ	Υ	Y ¹⁸	Y ¹⁹	Y ²⁰	Y 20,21
84	Fishing activities and related services	N^5	Y 5	Υ	Υ	Υ	Υ	Υ
85	Mining activities and related services	N	Y 5	Υ	Υ	Υ	Υ	Υ
89	Other resources production and extraction	N	Y 5	Υ	Υ	Υ	Υ	Υ

- Suggested maximum density of 1-2 dwelling units per acre possibly increased under a Planned Unit Development where maximum lot coverage is less than 20 percent.
- Within each land use category, uses exist where further definition may be needed due to the variation of densities in people and structures. Shopping malls and shopping centers are considered incompatible in any APZ.
- The placing of structures, buildings, or above ground utility lines in the clear zone is subject to severe restrictions. In a majority of the clear zones, these items are prohibited. See AFI 32-7063 and AFI 32-1026 for specific guidance.
- 4 No passenger terminals and no major above ground transmission lines in APZ I.
- 5 Factors to be considered: labor intensity, structural coverage, explosive characteristics, and air pollution.
- 6 Low-intensity office uses only. Meeting places, auditoriums, etc., are not recommended.
- 7 Excludes chapels.
- 8 Facilities must be low intensity.
- 9 Clubhouse not recommended.
- 10 Areas for gatherings of people are not recommended.
- Although local conditions may require residential use, it is discouraged in DNL 65-69 dB and strongly discouraged in DNL 70-74 dB. An evaluation should be conducted prior to approvals, indicating that a demonstrated community need for residential use would not be met if development were prohibited in these zones, and that there are no viable alternative locations.
- 11b Where the community determines the residential uses must be allowed, measures to achieve outdoor to indoor NLR for DNL 65-69 dB and DNL 70-74 dB should be incorporated into building codes and considered in individual approvals.
- 11c NLR criteria will not eliminate outdoor noise problems. However, building location and site planning, and design and use of berms and barriers can help mitigate outdoor exposure, particularly from near ground level sources. Measures

Table H-2. Land Use Compatibility, Noise Exposure, and Accident Potential, Cont'd

that reduce outdoor noise should be used whenever practical in preference to measures which only protect interior spaces.

- Measures to achieve the same NLR as required for facilities in the DNL 65-69 dB range must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas, or where the normal noise level is low.
- Measures to achieve the same NLR as required for facilities in the DNL 70-74 dB range must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas, or where the normal noise level is low.
- Measures to achieve the same NLR as required for facilities in the DNL 75-79 dB range must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas, or where the normal noise level is low.
- 15 If noise sensitive, use indicated NLR; if not, the use is compatible.
- 16 No buildings.
- 17 Land use is compatible provided special sound reinforcement systems are installed.
- 18 Residential buildings require the same NLR required for facilities in the DNL 65-69 dB range.
- 19 Residential buildings require the same NLR required for facilities in the DNL 70-74 dB range.
- 20 Residential buildings are not permitted.
- 21 Land use is not recommended. If the community decides the use is necessary, hearing protection devices should be worn by personnel.

Key: SLUCM = Standard Land Use Coding Manual, U.S. Department of Transportation; Y = Yes; land use and related structures are compatible without restriction; N = No; land use and related structures are not compatible and should be prohibited; A, B, or C = Land use and related structures generally compatible; measures to achieve Noise Level Reduction of A (25 db), B (30 db), or C (35 db) should be incorporated into the design and construction of structures; A*, B*, or C* = Land use generally compatible with Noise Level Reduction. However, measures to achieve an overall noise level reduction do not necessarily solve noise difficulties and additional evaluation is warranted. See appropriate footnotes; * = The designation of these uses as "compatible" in this zone reflects individual Federal agency and program consideration of general cost and feasibility factors, as well as past community experiences and program objectives. Localities, when evaluating the application of these guidelines to specific situations, may have different concerns or goals to consider.

H.2 NOISE EFFECTS

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- 2 The discussion in Section H.1.3 presented the global effect of noise on communities. The
- 3 following sections describe particular noise effects. These effects include non-auditory health
- 4 effects, annoyance, speech interference, sleep disturbance, noise-induced hearing
- 5 impairment, noise effects on animals and wildlife, effects on property values, noise effects on
- 6 structures, terrain, and cultural resources.

7 H.2.1 Annoyance

- 8 The primary effect of aircraft noise on exposed communities is one of annoyance. Noise
- 9 annoyance is defined by the EPA as any negative subjective reaction on the part of an
- individual or group (EPA 1974). As noted in the discussion of DNL above, community
- annoyance is best measured by that metric.
- Because the EPA Levels Document (EPA 1974) identified DNL of 55 dB as ". . . requisite to
- protect public health and welfare with an adequate margin of safety," it is commonly
- assumed that 55 dB should be adopted as a criterion for community noise analysis. From a
- noise exposure perspective, that would be an ideal selection. However, financial resources

- are generally not available to achieve that goal. Most agencies have identified DNL of 65 dB
- as a criterion which protects those most impacted by noise, and which can often be achieved
- on a practical basis (FICON 1992). This corresponds to about 12 percent of the exposed
- 4 population being highly annoyed.
- 5 Although DNL of 65 dB is widely used as a benchmark for significant noise impact, and is
- often an acceptable compromise, it is not a statutory limit, and it is appropriate to consider
- 7 other thresholds in particular cases. Local ordinances and regulations have been adopted by
- 8 many municipal governments to prevent civilian development near military installations that
- 9 would be incompatible with noise generated by military operations. The decision to adopt
- such measures, and the specific content of the ordinances and regulations, is up to the
- municipal government. In many cases, the 65 DNL noise contour line is adopted as the
- threshold level above which land use restrictions are invoked.

H.2.2 Speech Interference

- 14 Speech interference associated with aircraft noise is a primary cause of annoyance to
- individuals on the ground. The disruption of routine activities such as radio or television
- listening, telephone use, or family conversation gives rise to frustration and irritation. The
- 17 quality of speech communication is also important in classrooms, offices, and industrial
- settings and can cause fatigue and vocal strain in those who attempt to communicate over
- 19 the noise. Speech is an acoustic signal characterized by rapid fluctuations in sound level and
- 20 frequency pattern. It is essential for optimum speech intelligibility to recognize these
- 21 continually shifting sound patterns. Not only does noise diminish the ability to perceive the
- 22 auditory signal, but it also reduces a listener's ability to follow the pattern of signal
- 23 fluctuation. In general, interference with speech communication occurs when intrusive noise
- exceeds about 60 dB (FICON 1992).
- 25 Indoor speech interference can be expressed as a percentage of sentence intelligibility
- among two people speaking in relaxed conversation approximately 3 feet apart in a typical
- 27 living room or bedroom (EPA 1974). The percentage of sentence intelligibility is a non-linear
- function of the (steady) indoor background A-weighted sound level. Such a curve-fit yields
- 29 100 percent sentence intelligibility for background levels below 57 dB and yields less than 10
- percent intelligibility for background levels above 73 dB. The function is especially sensitive
- to changes in sound level between 65 dB and 75 dB. As an example of the sensitivity, a 1 dB
- increase in background sound level from 70 dB to 71 dB yields a 14 percent decrease in
- sentence intelligibility. The sensitivity of speech interference to noise at 65 dB and above is
- consistent with the criterion of DNL 65 dB generally taken from the Schultz curve. This is
- consistent with the observation that speech interference is the primary cause of annoyance.
- 36 **Classroom Criteria.** The effect of aircraft noise on children is a controversial area. Certain
- 37 studies indicate that, in certain situations, children are potentially more sensitive to noise
- compared to adults. For example, adults average roughly 10 percent better than young
- 39 children on speech intelligibility tests in high noise environments (ASA 2000). Some studies
- indicate that noise negatively impacts classroom learning (e.g., Shield and Dockrell 2008).
- In response to noise-specific and other environmental studies, Executive Order 13045,
- 42 Protection of Children from Environmental Health Risks and Safety Risks (1997), requires Federal
- 43 agencies to ensure that their policies, programs, and activities address environmental health

- and safety risks and to identify any disproportionate risks to children. While the issue of noise
- 2 impacts on children's learning is not fully settled, in May 2009, the American National
- 3 Standards Institute (ANSI) published a classroom acoustics standard entitled "Acoustical
- 4 Performance Criteria, Design Requirements, and Guidelines for Schools" (ANSI 2002). At
- 5 present, complying with the standard is voluntary in most locations. Essentially, the criteria
- 6 states that when the noisiest hour is dominated by noise from such sources as aircraft, the
- 7 limits for most classrooms are an hourly average A-weighted sound level of 40 dB, and the A-
- 8 weighted sound level must not exceed 40 dB for more than 10 percent of the hour. For
- 9 schools located near airfields, indoor noise levels would have to be lowered by 35-45 dBA
- relative to outdoor levels (ANSI 2009).

H.2.3 Sleep Disturbance

- 12 Sleep disturbance is another source of annoyance associated with aircraft noise. This is
- especially true because of the intermittent nature and content of aircraft noise, which is more
- disturbing than continuous noise of equal energy and neutral meaning.
- 15 Sleep disturbance may be measured in either of two ways. "Arousal" represents actual
- awakening from sleep, while a change in "sleep stage" represents a shift from one of four
- sleep stages to another stage of lighter sleep without actual awakening. In general, arousal
- requires a somewhat higher noise level than does a change in sleep stage.
- 19 An analysis sponsored by the Air Force summarized 21 published studies concerning the
- effects of noise on sleep (Pearsons et al. 1989). The analysis concluded that a lack of reliable
- 21 in-home studies, combined with large differences among the results from the various
- laboratory studies, did not permit development of an acceptably accurate assessment
- 23 procedure. The noise events used in the laboratory studies and in contrived in-home studies
- 24 were presented at much higher rates of occurrence than would normally be experienced.
- None of the laboratory studies were of sufficiently long duration to determine any effects of
- 26 habituation, such as that which would occur under normal community conditions. An
- extensive study of sleep interference in people's own homes (Ollerhead et al. 1992) showed
- very little disturbance from aircraft noise.
- 29 There is some controversy associated with these studies, so a conservative approach should
- 30 be taken in judging sleep interference. Based on older data, the EPA identified an indoor DNL
- of 45 dB as necessary to protect against sleep interference (EPA 1974). Assuming an outdoor-
- to-indoor noise level reduction of 20 dB for typical dwelling units, this corresponds to an
- outdoor DNL of 65 dB as minimizing sleep interference.
- A 1984 publication reviewed the probability of arousal or behavioral awakening in terms of
- 35 SEL (Kryter 1984). Figure H-4, extracted from Figure 10.37 of Kryter (1984), indicates that an
- indoor SEL of 65 dB or lower should awaken less than 5 percent of those exposed. These
- 37 results do not include any habituation over time by sleeping subjects. Nevertheless, this
- provides a reasonable guideline for assessing sleep interference and corresponds to similar
- 39 guidance for speech interference, as noted above.
- 40 It was noted in the early sleep disturbance research that the controlled laboratory studies did
- 41 not account for many factors that are important to sleep behavior, such as habituation to the
- 42 environment and previous exposure to noise and awakenings from sources other than aircraft
- 43 noise. In the early 1990s, field studies were conducted to validate the earlier laboratory work.

The most significant finding from these studies was that an estimated 80 to 90 percent of sleep disturbances were not related to individual outdoor noise events, but were instead the result of indoor noise sources and other non-noise-related factors. The results showed that there was less of an effect of noise on sleep in real-life conditions than had been previously reported from laboratory studies.

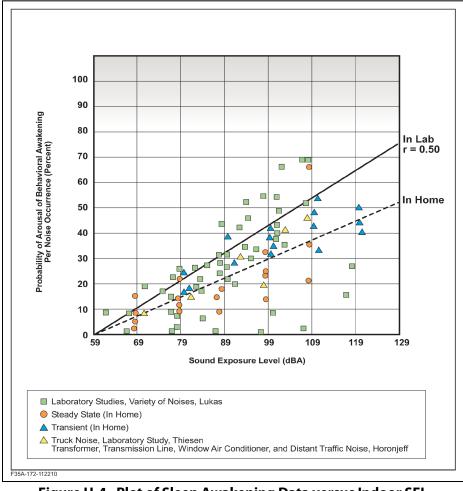


Figure H-4. Plot of Sleep Awakening Data versus Indoor SEL

The interim Federal Interagency Committee on Noise (FICON) dose-response curve that was recommended for use in 1992 was based on the most pertinent sleep disturbance research that was conducted through the 1970s, primarily in laboratory settings. After that time, considerable field research was conducted to evaluate the sleep effects in peoples' normal, home environment. Laboratory sleep studies tend to show higher values of sleep disturbance than field studies because people who sleep in their own homes are habituated to their environment and, therefore, do not wake up as easily (FICAN 1997).

Based on the new information, the Federal Interagency Committee on Aircraft Noise (FICAN) updated its recommended dose-response curve in 1997, depicted as the lower curve in Figure H-5. This figure is based on the results of three field studies (Ollerhead et al. 1992; Fidell et al. 1994; Fidell et al. 1995a and 1995b), along with the datasets from six previous field studies.

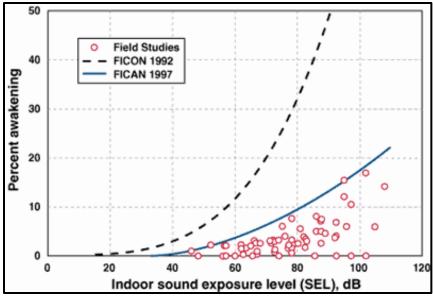


Figure H-5. FICAN's 1997 Recommended Sleep Disturbance Dose-Response Relationship

The new relationship represents the higher end, or upper envelope, of the latest field data. It should be interpreted as predicting the "maximum percent of the exposed population expected to be behaviorally awakened" or the "maximum percent awakened" for a given residential population. According to this relationship, a maximum of 3 percent of people would be awakened at an indoor SEL of 58 dB, compared to 10 percent using the 1992 curve. An indoor SEL of 58 dB is equivalent to outdoor SEL's of 73 and 83 dB respectively assuming 15 and 25 dB noise level reduction from outdoor to indoor with windows open and closed, respectively.

The FICAN 1997 curve is represented by the following equation:

Percent Awakenings = $0.0087 \times [SEL - 30]^{1.79}$

Note the relatively low percentage of awakenings to fairly high noise levels. People think they are awakened by a noise event, but usually the reason for awakening is otherwise. For example, the 1992 UK CAA study found the average person was awakened about 18 times per night for reasons other than exposure to an aircraft noise – some of these awakenings are due to the biological rhythms of sleep and some to other reasons that were not correlated with specific aircraft events.

In July 2008 ANSI and the Acoustical Society of America (ASA) published a method to estimate the percent of the exposed population that might be awakened by multiple aircraft noise events based on statistical assumptions about the probability of awakening (or not awakening) (ANSI 2008). This method relies on probability theory rather than direct field research/experimental data to account for multiple events.

Figure H-6 depicts the awakenings data that form the basis and equations of ANSI (2008). The curve labeled 'Eq. (B1)' is the relationship between noise and awakening endorsed by FICAN in 1997. The ANSI recommended curve labeled 'Eq. 1)' quantifies the probability of awakening for a population of sleepers who are exposed to an outdoor noise event as a function of the associated indoor SEL in the bedroom. This curve was derived from studies of behavioral awakenings associated with noise events in "steady state" situations where the

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population has been exposed to the noise long enough to be habituated. The data points in Figure H-6 come from these studies. Unlike the FICAN curve, the ANSI 2008 curve represents

the average of the field research data points.

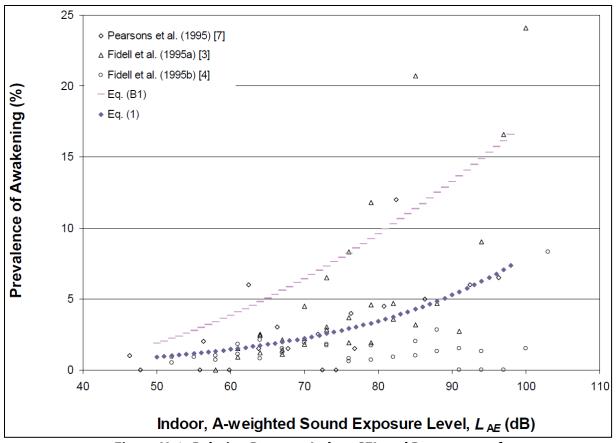


Figure H-6. Relation Between Indoor SEL and Percentage of Persons Awakened as Stated in ANSI/ASA S12.9-2008/Part 6

In December 2008, FICAN recommended the use of this new estimation procedure for future analyses of behavioral awakenings from aircraft noise. In that statement, FICAN also recognized that additional sleep disturbance research is underway by various research organizations, and results of that work may result in additional changes to FICAN's position. Until that time, FICAN recommends the use of ANSI (2008).

H.2.4 Noise-Induced Hearing Impairment

- 13 Residents in surrounding communities express concerns regarding the effects of aircraft noise
- on hearing. This section provides a brief overview of hearing loss caused by noise exposure.
- 15 The goal is to provide a sense of perspective as to how aircraft noise (as experienced on the
- 16 ground) compares to other activities that are often linked with hearing loss.
- 17 Hearing loss is generally interpreted as a decrease in the ear's sensitivity or acuity to perceive
- sound; i.e. a shift in the hearing threshold to a higher level. This change can either be a
- Temporary Threshold Shift (TTS), or a Permanent Threshold Shift (PTS) (Berger et al. 1995).
- 20 TTS can result from exposure to loud noise over a given amount of time, yet the hearing loss
- is not necessarily permanent. An example of TTS might be a person attending a loud music

- concert. After the concert is over, the person may experience a threshold shift that may last
- 2 several hours, depending upon the level and duration of exposure. While experiencing TTS,
- the person becomes less sensitive to low-level sounds, particularly at certain frequencies in
- 4 the speech range (typically near 4,000 Hz). Normal hearing ability eventually returns, as long
- 5 as the person has enough time to recover within a relatively quiet environment.
- 6 PTS usually results from repeated exposure to high noise levels, where the ears are not given
- 7 adequate time to recover from the strain and fatigue of exposure. A common example of PTS
- 8 is the result of working in a loud environment such as a factory. It is important to note that a
- 9 temporary shift (TTS) can eventually become permanent (PTS) over time with continuous
- exposure to high noise levels. Thus, even if the ear is given time to recover from TTS,
- repeated occurrence of TTS may eventually lead to permanent hearing loss. The point at
- which a TTS results in a PTS is difficult to identify and varies with a person's sensitivity.
- 13 Considerable data on hearing loss have been collected and analyzed by the scientific/medical
- 14 community. It has been well established that continuous exposure to high noise levels will
- damage human hearing (EPA 1978). The Occupational Safety and Health Administration
- 16 (OSHA) regulation of 1971 standardizes the limits on workplace noise exposure for protection
- 17 from hearing loss as an average level of 90 dB over an 8-hour work period or 85 dB over a
- 18 16-hour period (the average level is based on a 5 dB decrease per doubling of exposure time)
- 19 (DoL 1971). Even the most protective criterion (no measurable hearing loss for the most
- sensitive portion of the population at the ear's most sensitive frequency, 4,000 Hz, after a
- 40-year exposure) is an average sound level of 70 dB over a 24-hour period.
- The EPA established 75 dB for an 8-hour exposure and 70 dB for a 24-hour exposure as the
- 23 average noise level standard requisite to protect 96 percent of the population from greater
- 24 than a 5 dB PTS (EPA 1978). The National Academy of Sciences Committee on Hearing,
- 25 Bioacoustics, and Biomechanics identified 75 dB as the minimum level at which hearing loss
- 26 may occur (CHABA 1977). Finally, the World Health Organization (WHO) has concluded that
- 27 environmental and leisure-time noise below an L_{eq}24 value of 70 dB "will not cause hearing
- loss in the large majority of the population, even after a lifetime of exposure" (WHO 2000).

H.2.4.1 Hearing Loss and Aircraft Noise

- 30 The 1982 EPA Guidelines report specifically addresses the criteria and procedures for
- assessing the noise-induced hearing loss in terms of the Noise-Induced Permanent Threshold
- 32 Shift (NIPTS), a quantity that defines the permanent change in hearing level, or threshold,
- caused by exposure to noise (EPA 1982). This effect is also described as Potential Hearing
- Loss (PHL). Numerically, the NIPTS is the change in threshold averaged over the frequencies
- 35 0.5, 1, 2, and 4 kHz that can be expected from daily exposure to noise over a normal working
- lifetime of 40 years, with the exposure beginning at an age of 20 years. A grand average of
- the NIPTS over time (40 years) and hearing sensitivity (10 to 90 percentiles of the exposed
- population) is termed the Average NIPTS, or Ave NIPTS for short. The Average Noise Induced
- 39 Permanent Threshold Shift (Ave. NIPTS) that can be expected for noise exposure as measured
- 40 by the DNL metric is given in Table H-3.

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Table H-3. Average NIPTS and 10th Percentile NIPTS as a Function of DNL

DAIL	A NIDTO JD*	40th Dansouttle NIDTO 4D*
DNL	Ave. NIPTS dB*	10th Percentile NIPTS dB*
75–76	1.0	4.0
76–77	1.0	4.5
77–78	1.6	5.0
78–79	2.0	5.5
79–80	2.5	6.0
80–81	3.0	7.0
81–82	3.5	8.0
82–83	4.0	9.0
83–84	4.5	10.0
84–85	5.5	11.0
85–86	6.0	12.0
86–87	7.0	13.5
87–88	7.5	15.0
88–89	8.5	16.5
89–90	9.5	18.0

Note: * Rounded to the nearest 0.5 dB.

For example, for a noise exposure of 80 dB DNL, the expected lifetime average value of NIPTS 2 is 2.5 dB, or 6.0 dB for the 10th percentile. Characterizing the noise exposure in terms of DNL 3 will usually overestimate the assessment of hearing loss risk as DNL includes a 10 dB 4

weighting factor for aircraft operations occurring between 10 p.m. and 7 a.m. If, however,

5 flight operations between the hours of 10 p.m. and 7 a.m. account for 5 percent or less of the 6

total 24-hour operations, the overestimation is on the order of 1.5 dB.

From a civilian airport perspective, the scientific community has concluded that there is little likelihood that the resulting noise exposure from aircraft noise could result in either a temporary or permanent hearing loss. Studies on community hearing loss from exposure to aircraft flyovers near airports showed that there is no danger, under normal circumstances, of hearing loss due to aircraft noise (Newman and Beattie 1985). The EPA criterion $(L_{eq}24 = 70 \text{ dBA})$ can be exceeded in some areas located near airports, but that is only the case outdoors. Inside a building, where people are more likely to spend most of their time, the average noise level will be much less than 70 dBA (Eldred and von Gierke 1993). Eldred and von Gierke also report that "several studies in the U.S., Japan, and the U.K. have confirmed the predictions that the possibility for permanent hearing loss in communities, even under the most intense commercial take-off and landing patterns, is remote."

With regard to military airbases, as individual aircraft noise levels are increasing with the introduction of new aircraft, a 2009 DoD policy directive requires that hearing loss risk be estimated for the at risk population, defined as the population exposed to DNL greater than or equal to 80 dB and higher (DoD 2009). Specifically, DoD components are directed to "use the 80 Day-Night A-Weighted (DNL) noise contour to identify populations at the most risk of potential hearing loss." This does not preclude populations outside the 80 DNL contour, i.e. at lower exposure levels, from being at some degree of risk of hearing loss. However, the

- analysis should be restricted to populations within this contour area, including residents of
- 2 on-base housing. The exposure of workers inside the base boundary area should be
- 3 considered occupational and evaluated using the appropriate DoD component regulations
- 4 for occupational noise exposure.
- 5 With regard to military airspace activity, studies have shown conflicting results. A 1995
- 6 laboratory study measured changes in human hearing from noise representative of low-flying
- aircraft on Military Training Routes (MTRs) (Nixon et al. 1993). The potential effects of aircraft
- 8 flying along MTRs is of particular concern because of maximum overflight noise levels can
- 9 exceed 115 dB, with rapid increases in noise levels exceeding 30 dB per second. In this study,
- participants were first subjected to four overflight noise exposures at A-weighted levels of
- 11 115 dB to 130 dB. Fifty percent of the subjects showed no change in hearing levels, 25
- percent had a temporary 5 dB *increase* in sensitivity (the people could hear a 5 dB wider range
- of sound than before exposure), and 25 percent had a temporary 5 dB decrease in sensitivity
- 14 (the people could hear a 5 dB narrower range of sound than before exposure). In the next
- phase, participants were subjected to a single overflight at a maximum level of 130 dB for
- eight successive exposures, separated by 90 seconds or until a temporary shift in hearing was
- observed. The temporary hearing threshold shifts showed an increase in sensitivity of up to
- 18 10 dB.

- In another study of 115 test subjects between 18 and 50 years old in 1999, temporary
- threshold shifts were measured after laboratory exposure to military low-altitude flight noise
- 21 (Ising et al. 1999). According to the authors, the results indicate that repeated exposure to
- 22 military low-altitude flight noise with L_{max} greater than 114 dB, especially if the noise level
- increases rapidly, may have the potential to cause noise induced hearing loss in humans.
- 24 Aviation and typical community noise levels near airports are not comparable to the
- occupational or recreational noise exposures associated with hearing loss. Studies of aircraft
- 26 noise levels associated with civilian airport activity have not definitively correlated permanent
- 27 hearing impairment with aircraft activity. It is unlikely that airport neighbors will remain
- outside their homes 24 hours per day, so there is little likelihood of hearing loss below an
- average sound level of 75 dB DNL. Near military airbases, average noise levels above 75 dB
- may occur, and while new DoD policy dictates that NIPTS be evaluated, no research results to
- date have definitively related permanent hearing impairment to aviation noise.

H.2.5 Nonauditory Health Effects

- 33 Studies have been conducted to determine whether correlations exist between noise
- exposure and cardiovascular problems, birth weight, and mortality rates. The nonauditory
- effect of noise on humans is not as easily substantiated as the effect on hearing. Prolonged
- 36 stress is known to be a contributor to a number of health disorders. Kryter and Poza (1980)
- 37 state, "It is more likely that noise-related general ill-health effects are due to the psychological
- 38 annoyance from the noise interfering with normal everyday behavior, than it is from the noise
- 39 eliciting, because of its intensity, reflexive response in the autonomic or other physiological
- 40 systems of the body." Psychological stresses may cause a physiological stress reaction that
- 41 could result in impaired health. The National Institute for Occupational Safety and Health
- 42 (NIOSH) and EPA commissioned the Committee on Hearing, Bioacoustics and Biomechanics
- 43 (CHABA) in 1981 to study whether established noise standards are adequate to protect
- against health disorders other than hearing defects. CHABA's conclusion was that:

Evidence from available research reports is suggestive, but it does not provide definitive answers to the question of health effects, other than to the auditory system, of long-term exposure to noise. It seems prudent, therefore, in the absence of adequate knowledge as to whether or not noise can produce effects upon health other than damage to auditory system, either directly or mediated through stress, that insofar as feasible, an attempt should be made to obtain more critical evidence.

Since the CHABA report, there have been further studies that suggest that noise exposure may cause hypertension and other stress-related effects in adults. Near an airport in Stockholm, Sweden, the prevalence of hypertension was reportedly greater among nearby residents who were exposed to energy averaged noise levels exceeding 55 dB and maximum noise levels exceeding 72 dB, particularly older subjects and those not reporting impaired hearing ability (Rosenlund et al. 2001). A study of elderly volunteers who were exposed to simulated military low-altitude flight noise reported that blood pressure was raised by L_{max} of 112 dB and high speed level increase (Michalak et al. 1990). Yet another study of subjects exposed to varying levels of military aircraft or road noise found no significant relationship between noise level and blood pressure (Pulles et al. 1990).

Most studies of nonauditory health effects of long-term noise exposure have found that noise exposure levels established for hearing protection will also protect against any potential nonauditory health effects, at least in workplace conditions. One of the best scientific summaries of these findings is contained in the lead paper at the National Institutes of Health Conference on Noise and Hearing Loss, held on 22 to 24 January 1990 in Washington, D.C.:

The nonauditory effects of chronic noise exposure, when noise is suspected to act as one of the risk factors in the development of hypertension, cardiovascular disease, and other nervous disorders, have never been proven to occur as chronic manifestations at levels below these criteria (an average of 75 dBA for complete protection against hearing loss for an 8-hour day).

At the 1988 International Congress on Noise as a Public Health Problem, most studies attempting to clarify such health effects did not find them at levels below the criteria protective of noise-induced hearing loss, and even above these criteria, results regarding such health effects were ambiguous. Consequently, one comes to the conclusion that establishing and enforcing exposure levels protecting against noise-induced hearing loss would not only solve the noise-induced hearing loss problem, but also any potential nonauditory health effects in the work place" (von Gierke 1990).

Although these findings were specifically directed at noise effects in the workplace, they are equally applicable to aircraft noise effects in the community environment. Research studies regarding the nonauditory health effects of aircraft noise are ambiguous, at best, and often contradictory. Yet, even those studies that purport to find such health effects use time-average noise levels of 75 dB and higher for their research.

For example, two University of California, Los Angeles (UCLA) researchers apparently found a relationship between aircraft noise levels under the approach path to Los Angeles International Airport and increased mortality rates among the exposed residents by using an average noise exposure level greater than 75 dB for the "noise-exposed" population (Meacham and Shaw 1979). Nevertheless, three other UCLA professors analyzed those same

- data and found no relationship between noise exposure and mortality rates (Frerichs, et al. 1980).
- 3 As a second example, two other UCLA researchers used this same population near LAX to
- 4 show a higher rate of birth defects for 1970 to 1972 when compared with a control group
- 5 residing away from the airport (Jones and Tauscher 1978). Based on this report, a separate
- 6 group at the Center for Disease Control performed a more thorough study of populations
- 7 near Atlanta's Hartsfield International Airport for 1970 to 1972 and found no relationship in
- 8 their study of 17 identified categories of birth defects to aircraft noise levels above 65 dB
- 9 (Edmonds et al. 1979).
- In summary, there is no scientific basis for a claim that potential health effects exist for aircraft
- time average sound levels below 75 dB. The potential for noise to affect physiological health,
- such as the cardiovascular system, has been speculated; however, no unequivocal evidence
- exists to support such claims (Harris 1997). Conclusions drawn from a review of health effect
- studies involving military low-altitude flight noise with its unusually high maximum levels and
- rapid rise in sound level have shown no increase in cardiovascular disease (Schwarze and
- 16 Thompson 1993). Additional claims that are unsupported include flyover noise producing
- increased mortality rates and increases in cardiovascular death, aggravation of post-traumatic
- stress syndrome, increased stress, increases in admissions to mental hospitals, and adverse
- effects on pregnant women and the unborn fetus (Harris 1997).

H.2.6 Performance Effects

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- 21 The effect of noise on the performance of activities or tasks has been the subject of many
- studies. Some of these studies have established links between continuous high noise levels
- 23 and performance loss. Noise-induced performance losses are most frequently reported in
- studies employing noise levels in excess of 85 dB. Little change has been found in low-noise
- cases. It has been cited that moderate noise levels appear to act as a stressor for more
- sensitive individuals performing a difficult psychomotor task. While the results of research on
- 27 the general effect of periodic aircraft noise on performance have yet to yield definitive
- 28 criteria, several general trends have been noted including:
 - A periodic intermittent noise is more likely to disrupt performance than a steady-state continuous noise of the same level. Flyover noise, due to its intermittent nature, might be more likely to disrupt performance than a steady-state noise of equal level.
 - Noise is more inclined to affect the quality than the quantity of work.
 - Noise is more likely to impair the performance of tasks that place extreme demands on the worker.

H.2.7 Noise Effects on Children

- 36 In response to noise-specific and other environmental studies, Executive Order 13045,
- 37 Protection of Children from Environmental Health Risks and Safety Risks (1997), requires
- 38 Federal agencies to ensure that policies, programs, and activities address environmental
- 39 health and safety risks to identify any disproportionate risks to children.
- 40 A review of the scientific literature indicates that there has not been a tremendous amount of
- research in the area of aircraft noise effects on children. The research reviewed does suggest

- that environments with sustained high background noise can have variable effects, including
- 2 noise effects on learning and cognitive abilities, and reports of various noise-related
- 3 physiological changes.

4 H.2.7.1 Effects on Learning and Cognitive Abilities

- 5 In 2002 ANSI refers to studies that suggest that loud and frequent background noise can
- 6 affect the learning patterns of young children (ANSI 2002). ANSI provides discussion on the
- 7 relationships between noise and learning, and stipulates design requirements and acoustical
- 8 performance criteria for outdoor-to-indoor noise isolation. School design is directed to be
- 9 cognizant of, and responsive to surrounding land uses and the shielding of outdoor noise
- 10 from the indoor environment. The ANSI acoustical performance criteria for schools include
- the requirement that the 1-hour-average background noise level shall not exceed 35 dBA in
- core learning spaces smaller than 20,000 cubic-feet and 40 dBA in core learning spaces with
- enclosed volumes exceeding 20,000 cubic-feet. This would require schools be constructed
- such that, in guiet neighborhoods indoor noise levels are lowered by 15 to 20 dBA relative to
- outdoor levels. In schools near airports, indoor noise levels would have to be lowered by
- 16 35 to 45 dBA relative to outdoor levels (ANSI 2002).
- 17 The studies referenced by ANSI to support the new standard are not specific to jet aircraft
- noise and the potential effects on children. However, there are references to studies that
- 19 have shown that children in noisier classrooms scored lower on a variety of tests. Excessive
- 20 background noise or reverberation within schools causes interferences of communication
- 21 and can therefore create an acoustical barrier to learning (ANSI 2002). Studies have been
- 22 performed that contribute to the body of evidence emphasizing the importance of
- communication by way of the spoken language to the development of cognitive skills. The
- ability to read, write, comprehend, and maintain attentiveness, are, in part, based upon
- whether teacher communication is consistently intelligible (ANSI 2002).
- 26 Numerous studies have shown varying degrees of effects of noise on the reading
- comprehension, attentiveness, puzzle-solving, and memory/recall ability of children. It is
- generally accepted that young children are more susceptible than adults to the effects of
- 29 background noise. Because of the developmental status of young children (linguistic,
- cognitive, and proficiency), barriers to hearing can cause interferences or disruptions in
- 31 developmental evolution.
- Research on the impacts of aircraft noise, and noise in general, on the cognitive abilities of
- 33 school-aged children has received more attention in the last 20 years. Several studies suggest
- that aircraft noise can affect the academic performance of schoolchildren. Although many
- factors could contribute to learning deficits in school-aged children (e.g., socioeconomic
- level, home environment, diet, sleep patterns), evidence exists that suggests that chronic
- exposure to high aircraft noise levels can impair learning. Specifically, elementary school
- children attending schools near New York City's two airports demonstrated lower reading
- scores than children living farther away from the flight paths (Green et al. 1982). Researchers
- 40 have found that tasks involving central processing and language comprehension (such as
- reading, attention, problem solving, and memory) appear to be the most affected by noise
- 42 (Evans and Lepore 1993, Evans et al. 1998). It has been demonstrated that chronic exposure
- of first- and second-grade children to aircraft noise can result in reading deficits and impaired

- speech perception (i.e., the ability to hear common, low-frequency [vowel] sounds but not
- 2 high frequencies [consonants] in speech) (Evans and Maxwell 1997).
- The Evans and Maxwell (1997) study found that chronic exposure to aircraft noise resulted in
- 4 reading deficits and impaired speech perception for first- and second-grade children. Other
- 5 studies found that children residing near the Los Angeles International Airport had more
- 6 difficulty solving cognitive problems and did not perform as well as children from guieter
- schools in puzzle-solving and attentiveness (Bronzaft 1997, Cohen et al. 1980). Children
- 8 attending elementary schools in high aircraft noise areas near London's Heathrow Airport
- 9 demonstrated poorer reading comprehension and selective cognitive impairments
- (Haines et al. 2001a, 2001b). Similar studies involving the testing of attention, memory, and
- reading comprehension of school children located near airports showed that their tests
- 12 exhibited reduced performance results compared to those of similar groups of children who
- were located in guieter environments (Evans et al. 1998, Haines et al. 1998). The Haines and
- Stansfeld study indicated that there may be some long-term effects associated with exposure,
- as one-year follow-up testing still demonstrated lowered scores for children in higher noise
- schools (Haines et al. 2001a, 2001b). In contrast, a 2002 study found that although children
- living near the old Munich airport scored lower in standardized reading and long-term
- memory tests than a control group, their performance on the same tests were equal to that of
- the control group once the airport was closed (Hygge et al. 2002).
- 20 Finally, although it is recognized that there are many factors that could contribute to learning
- deficits in school-aged children, there is increasing awareness that chronic exposure to high
- 22 aircraft noise levels may impair learning. This awareness has led the WHO and a North
- 23 Atlantic Treaty Organization (NATO) working group to conclude that daycare centers and
- schools should not be located near major sources of noise, such as highways, airports, and
- industrial sites (WHO 2000, NATO 2000).

26 H.2.7.2 Health Effects

- 27 Physiological effects in children exposed to aircraft noise and the potential for health effects
- 28 have also been the focus of limited investigation. Studies in the literature include
- 29 examination of blood pressure levels, hormonal secretions, and hearing loss.
- 30 As a measure of stress response to aircraft noise, authors have looked at blood pressure
- readings to monitor children's health. Children who were chronically exposed to aircraft
- noise from a new airport near Munich, Germany, had modest (although significant) increases
- in blood pressure, significant increases in stress hormones, and a decline in quality of life
- 34 (Evans et al. 1998). Children attending noisy schools had statistically significant average
- systolic and diastolic blood pressure (p<0.03). Systolic blood pressure means were 89.68 mm
- 36 for children attending schools located in noisier environments compared to 86.77 mm for a
- 37 control group. Similarly, diastolic blood pressure means for the noisier environment group
- were 47.84 mm and 45.16 for the control group (Cohen et al. 1980).
- 39 Although the literature appears limited, studies focused on the wide range of potential effects
- of aircraft noise on school children have also investigated hormonal levels between groups of
- 41 children exposed to aircraft noise compared to those in a control group. Specifically, two
- 42 studies analyzed cortisol and urinary catecholamine levels in school children as
- 43 measurements of stress response to aircraft noise (Haines et al. 2001b, 2001c). In both

- instances, there were no differences between the aircraft-noise-exposed children and the
- 2 control groups.
- 3 Other studies have reported hearing losses from exposure to aircraft noise. Noise-induced
- 4 hearing loss was reportedly higher in children who attended a school located under a flight
- 5 path near a Taiwan airport, as compared to children at another school far away (Chen
- 6 et al. 1997). Another study reported that hearing ability was reduced significantly in
- 7 individuals who lived near an airport and were frequently exposed to aircraft noise (Chen and
- 8 Chen 1993). In that study, noise exposure near the airport was reportedly uniform, with DNL
- 9 greater than 75 dB and maximum noise levels of about 87 dB during overflights. Conversely,
- several other studies that were reviewed reported no difference in hearing ability between
- children exposed to high levels of airport noise and children located in quieter areas (Fisch
- 12 1977, Andrus et al. 1975, Wu et al. 1995).

H.2.8 Noise Effects on Domestic Animals and Wildlife

- Hearing is critical to an animal's ability to react, compete, reproduce, hunt, forage, and survive
- in its environment. While the existing literature does include studies on possible effects of jet
- aircraft noise and sonic booms on wildlife, there appears to have been little concerted effort
- in developing quantitative comparisons of aircraft noise effects on normal auditory
- characteristics. Behavioral effects have been relatively well described, but the larger
- 19 ecological context issues, and the potential for drawing conclusions regarding effects on
- 20 populations, has not been well developed.
- 21 The relationships between potential auditory/physiological effects and species interactions
- 22 with their environments are not well understood. Manci et al. (1988) assert that the
- 23 consequences that physiological effects may have on behavioral patterns are vital to
- understanding the long-term effects of noise on wildlife. Questions regarding the effects
- 25 (if any) on predator-prey interactions, reproductive success, and intra-inter specific behavior
- 26 patterns remain.
- 27 The following discussion provides an overview of the existing literature on noise effects
- 28 (particularly jet aircraft noise) on animal species. The literature reviewed outlines those
- studies that have focused on the observations of the behavioral effects that jet aircraft and
- 30 sonic booms have on animals.
- A great deal of research was conducted in the 1960s and 1970s on the effects of aircraft noise
- on the public and the potential for adverse ecological impacts. These studies were largely
- completed in response to the increase in air travel and the introduction of supersonic jet
- aircraft. According to Manci et al. (1988), the foundation of information created from that
- focus does not necessarily correlate or provide information specific to the impacts to wildlife
- in areas overflown by aircraft at supersonic speed or at low altitudes.
- 37 The abilities to hear sounds and noise and to communicate assist wildlife in maintaining
- group cohesiveness and survivorship. Social species communicate by transmitting calls of
- warning, introduction, and others that are subsequently related to an individual's or group's
- 40 responsiveness.
- 41 Animal species differ greatly in their responses to noise. Noise effects on domestic animals
- and wildlife are classified as primary, secondary, and tertiary. Primary effects are direct,

physiological changes to the auditory system, and most likely include the masking of auditory 1 signals. Masking is defined as the inability of an individual to hear important environmental 2 signals that may arise from mates, predators, or prey. There is some potential that noise could 3 disrupt a species' ability to communicate or interfere with behavioral patterns (Manci 4 et al. 1988). Although the effects are likely temporal, aircraft noise may cause masking of 5 auditory signals within exposed faunal communities. Animals rely on hearing to avoid 6 predators, obtain food, and communicate and attract other members of their species. Aircraft 7 noise may mask or interfere with these functions. Other primary effects, such as ear drum 8 rupture or temporary and permanent hearing threshold shifts, are not as likely given the 9 subsonic noise levels produced by aircraft overflights. Secondary effects may include 10 non-auditory effects such as stress and hypertension; behavioral modifications; interference 11 with mating or reproduction; and impaired ability to obtain adequate food, cover, or water. 12 Tertiary effects are the direct result of primary and secondary effects. These include 13 population decline and habitat loss. Most of the effects of noise are mild enough to be 14 undetectable as variables of change in population size or population growth against the 15 background of normal variation (Bowles 1995). Other environmental variables (e.g., 16 predators, weather, changing prey base, ground-based disturbance) also influence secondary 17 and tertiary effects and confound the ability to identify the ultimate factor in limiting 18 productivity of a certain nest, area, or region (Smith et al. 1988). Overall, the literature 19 20 suggests that species differ in their response to various types, durations, and sources of noise (Manci et al. 1988). 21

22 Many scientific studies have investigated the effects of aircraft noise on wildlife, and some have focused on wildlife "flight" due to noise. Apparently, animal responses to aircraft are 23 influenced by many variables, including size, speed, proximity (both height above the ground 24 and lateral distance), engine noise, color, flight profile, and radiated noise. The type of aircraft 25 (e.g., fixed wing versus rotor-wing [helicopter]) and type of flight mission may also produce 26 different levels of disturbance, with varying animal responses (Smith et al. 1988). 27 Consequently, it is difficult to generalize animal responses to noise disturbances across 28 29 species.

One result of the 1988 Manci et al. literature review was the conclusion that, while behavioral 30 observation studies were relatively limited, a general behavioral reaction in animals from 31 exposure to aircraft noise is the startle response. The intensity and duration of the startle 32 response appears to be dependent on which species is exposed, whether there is a group or 33 an individual, and whether there have been previous exposures. Responses range from flight, 34 trampling, stampeding, jumping, or running to movement of the head in the apparent 35 direction of the noise source. Manci et al. (1988) reported that the literature indicated that 36 avian species may be more sensitive to aircraft noise than mammals. 37

H.2.8.1 Domestic Animals

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Although some studies report that the effects of aircraft noise on domestic animals is inconclusive, a majority of the literature reviewed indicates that domestic animals exhibit some behavioral responses to military overflights, but generally seem to habituate to the disturbances over a period of time. Mammals in particular appear to react to noise at sound levels higher than 90 dB, with responses including the startle response, freezing (i.e., becoming temporarily stationary), and fleeing from the sound source. Many studies on

- domestic animals suggest that some species appear to acclimate to some forms of sound
- disturbance (Manci et al. 1988). Some studies have reported primary and secondary effects
- 3 including reduced milk production and rate of milk release, increased glucose concentrations,
- 4 decreased levels of hemoglobin, increased heart rate, and a reduction in thyroid activity.
- 5 These latter effects appear to represent a small percentage of the findings occurring in the
- 6 existing literature.
- 7 Some reviewers have indicated that earlier studies and claims by farmers linking adverse
- 8 effects of aircraft noise on livestock did not necessarily provide clear-cut evidence of cause
- and effect (Cottereau 1978). In contrast, many studies conclude that there is no evidence that
- aircraft overflights affect feed intake, growth, or production rates in domestic animals.
- 11 Cattle. In response to concerns about overflight effects on pregnant cattle, milk production,
- and cattle safety, the U.S. Air Force prepared a handbook for environmental protection that
- summarizes the literature on the impacts of low-altitude flights on livestock (and poultry), and
- includes specific case studies conducted in numerous airspaces across the country. Adverse
- effects have been found in a few studies, but have not been reproduced in other similar
- studies. One such study, conducted in 1983, suggested that 2 of 10 cows in late pregnancy
- 17 aborted after showing rising estrogen and falling progesterone levels. These increased
- hormonal levels were reported as being linked to 59 aircraft overflights. The remaining eight
- cows showed no changes in their blood concentrations and calved normally (Air Force 1994).
- 20 A similar study reported that abortions occurred in three out of five pregnant cattle after
- 21 exposing them to flyovers by six different aircraft (Air Force 1994). Another study suggested
- 22 that feedlot cattle could stampede and injure themselves when exposed to low-level
- overflights (Air Force 1994).
- 24 A majority of the studies reviewed suggest that there is little or no effect of aircraft noise on
- cattle. Studies presenting adverse effects on domestic animals have been limited. A number
- of studies (Parker and Bayley 1960; Kovalcik and Sottnik 1971) investigated the effects of jet
- aircraft noise and sonic booms on the milk production of dairy cows. Through the
- compilation and examination of milk production data from areas exposed to jet aircraft noise
- and sonic boom events, it was determined that milk yields were not affected. This was
- particularly evident in those cows that had been previously exposed to jet aircraft noise.
- One study examined the causes of 1,763 abortions in Wisconsin dairy cattle over a one-year
- time period, and none were associated with aircraft disturbances (Air Force 1993). In 1987,
- 33 Anderson contacted seven livestock operators for production data, and no effects of low-
- 34 altitude and supersonic flights were noted. Three out of 43 cattle previously exposed to low-
- altitude flights showed a startle response to an F/A-18 aircraft flying overhead at 500 feet
- 36 above ground level at 400 knots by running less than 10 meters. They resumed normal
- activity within one minute (Air Force 1994). In 1983, Beyer found that helicopters caused
- more reaction than other low-aircraft overflights. A 1964 study also found that helicopters
- 39 flying 30 to 60 feet overhead did not affect milk production and pregnancies of 44 cows and
- 40 heifers (Air Force 1994).
- Additionally, Beyer reported that five pregnant dairy cows in a pasture did not exhibit fright-
- 42 flight tendencies or have their pregnancies disrupted after being overflown by 79 low-
- altitude helicopter flights and 4 low-altitude, subsonic jet aircraft flights (Air Force 1994). A
- 44 1956 study found that the reactions of dairy and beef cattle to noise from low-altitude,

- subsonic aircraft were similar to those caused by paper blowing about, strange persons, or other moving objects (Air Force 1994).
- In a report to Congress, the U. S. Forest Service concluded that "evidence both from field studies of wild ungulates and laboratory studies of domestic stock indicate that the risks of
- damage are small (from aircraft approaches of 50 to 100 meters), as animals take care not to
- damage themselves (USFS 1992). If animals are overflown by aircraft at altitudes of 50 to
- 7 100 meters, there is no evidence that mothers and young are separated, that animals collide
- 8 with obstructions (unless confined) or that they traverse dangerous ground at too high a
- 9 rate." These varied study results suggest that, although the confining of cattle could magnify
- animal response to aircraft overflight, there is no proven cause-and-effect link between
- startling cattle from aircraft overflights and abortion rates or lower milk production.
- 12 Horses. Horses have also been observed to react to overflights of jet aircraft. Several of the
- studies reviewed reported a varied response of horses to low-altitude aircraft overflights.
- Observations made in 1966 and 1968 noted that horses galloped in response to jet flyovers
- 15 (Air Force 1993). In 1995, Bowles cites Kruger and Erath as observing horses exhibiting
- intensive flight reactions, random movements, and biting/kicking behavior. However, no
- injuries or abortions occurred, and there was evidence that the mares adapted somewhat to
- the flyovers over the course of a month (Air Force 1994). Although horses were observed
- 19 noticing the overflights, it did not appear to affect either survivability or reproductive success.
- There was also some indication that habituation to these types of disturbances was occurring.
- LeBlanc et al. studied the effects of F-14 jet aircraft noise on pregnant mares (1991). They
- 22 specifically focused on any changes in pregnancy success, behavior, cardiac function,
- 23 hormonal production, and rate of habituation. Their findings reported observations of "flight-
- 24 fright" reactions, which caused increases in heart rates and serum cortisol concentrations.
- 25 The mares, however, did habituate to the noise. Levels of anxiety and mass body movements
- were the highest after initial exposure, with intensities of responses decreasing thereafter.
- 27 There were no differences in pregnancy success when compared to a control group.
- 28 **Swine.** Generally, the literature findings for swine appear to be similar to those reported for
- 29 cows and horses. While there are some effects from aircraft noise reported in the literature,
- these effects are minor. Studies of continuous noise exposure (i.e., 6 hours or 72 hours of
- 31 constant exposure) reported influences on short-term hormonal production and release.
- 32 Additional constant exposure studies indicated the observation of stress reactions,
- 33 hypertension, and electrolyte imbalances (Dufour 1980). A study by Bond et al. demonstrated
- 34 no adverse effects on the feeding efficiency, weight gain, ear physiology, or thyroid and
- adrenal gland condition of pigs subjected to aircraft noise (1963). Observations of heart rate
- increase were recorded and it was noted that cessation of the noise resulted in the return to
- 37 normal heart rates. Conception rates and offspring survivorship did not appear to be
- influenced by exposure to aircraft noise.
- 39 Similarly, simulated aircraft noise at levels of 100 dB to 135 dB had only minor effects on the
- rate of feed utilization, weight gain, food intake, and reproduction rates of boars and sows
- exposed, and there were no injuries or inner ear changes observed (Manci et al. 1988;
- 42 Gladwin et al. 1988).
- 43 **Domestic Fowl.** According to a 1994 position paper by the U.S. Air Force on effects of
- low-altitude overflights (below 1,000 feet) on domestic fowl, overflight activity has negligible

- effects (Air Force 1994). The paper did recognize that given certain circumstances, adverse
- 2 effects can be serious. Some of the effects can be panic reactions, reduced productivity, and
- 3 effects on marketability (e.g., bruising of the meat caused during "pile-up" situations).
- 4 The typical reaction of domestic fowl after exposure to sudden, intense noise is a short-term
- 5 startle response. The reaction ceases as soon as the stimulus is ended, and within a few
- 6 minutes all activity returns to normal. More severe responses are possible depending on the
- 7 number of birds, the frequency of exposure, and environmental conditions. Large crowds of
- 8 birds and birds not previously exposed are more likely to pile up in response to a noise
- 9 stimulus (Air Force 1994). According to studies and interviews with growers, it is typically the
- previously unexposed birds that incite panic crowding, and the tendency to do so is markedly
- reduced within five exposures to the stimulus (Air Force 1994). This suggests that the birds
- habituate relatively quickly. Egg productivity was not adversely affected by infrequent noise
- bursts, even at exposure levels as high as 120 to 130 dBA.
- 14 Between 1956 and 1988, there were 100 recorded claims against the Navy for alleged damage
- to domestic fowl. The number of claims averaged three per year, with peak numbers of
- claims following publications of studies on the topic in the early 1960s (Air Force 1994). Many
- of the claims were disproved or did not have sufficient supporting evidence. The claims were
- 18 filed for the following alleged damages: 55 percent for panic reactions, 31 percent for
- decreased production, 6 percent for reduced hatchability, 6 percent for weight loss, and less
- than 1 percent for reduced fertility (Air Force 1994).
- 21 **Turkeys.** The review of the existing literature suggests that there has not been a concerted or
- 22 widespread effort to study the effects of aircraft noise on commercial turkeys. One study
- 23 involving turkeys examined the differences between simulated versus actual overflight
- 24 aircraft noise, turkey responses to the noise, weight gain, and evidence of habituation
- 25 (Bowles et al. 1990). Findings from the study suggested that turkeys habituated to jet aircraft
- 26 noise quickly, that there were no growth rate differences between the experimental and
- 27 control groups, and that there were some behavioral differences that increased the difficulty
- in handling individuals within the experimental group.
- 29 Low-altitude overflights were shown to cause turkey flocks which were kept inside turkey
- 30 houses to occasionally pile up and experience high mortality rates due to the aircraft noise
- and a variety of disturbances unrelated to aircraft (Air Force 1994).

H.2.8.2 Wildlife

- 33 Studies on the effects of overflights and sonic booms on wildlife have been focused mostly on
- avian species and ungulates such as caribou and bighorn sheep. Few studies have been
- 35 conducted on marine mammals, small terrestrial mammals, reptiles, amphibians, and
- carnivorous mammals. Generally, species that live entirely below the surface of the water
- have also been ignored due to the fact they do not experience the same level of sound as
- terrestrial species (NPS 1994). Wild ungulates appear to be much more sensitive to noise
- 39 disturbance than domestic livestock (Manci et al. 1988). This may be due to previous
- 40 exposure to disturbances. One common factor appears to be that low-altitude flyovers seem
- to be more disruptive in terrain where there is little cover (Manci et al. 1988).

H.2.8.3 Mammals

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Terrestrial Mammals. Studies of terrestrial mammals have shown that noise levels of 120 2 3 dBA can damage mammals' ears, and levels of 95 dBA can cause temporary loss of hearing acuity. Noise from aircraft has affected other large carnivores by causing changes in home 4 ranges, foraging patterns, and breeding behavior. One study recommended that aircraft not 5 be allowed to fly at altitudes below 2,000 feet above ground level over important grizzly and 6 7 polar bear habitat (Dufour 1980). Wolves have been frightened by low-altitude flights that were 25 to 1,000 feet off the ground. However, wolves have been found to adapt to aircraft 8 overflights and noise as long as they were not being hunted from aircraft (Dufour 1980). 9

Wild ungulates (American bison, caribou, bighorn sheep) appear to be much more sensitive 10 to noise disturbance than domestic livestock (Weisenberger et al. 1996). Behavioral reactions 11 may be related to the past history of disturbances by such things as humans and aircraft. 12 Common reactions of reindeer kept in an enclosure and exposed to aircraft noise disturbance 13 were a slight startle response, raising of the head, pricking ears, and scenting of the air. Panic 14 reactions and extensive changes in behavior of individual animals were not observed. 15 Observations of caribou in Alaska exposed to fixed-wing aircraft and helicopters showed 16 running and panic reactions occurred when overflights were at an altitude of 200 feet or less. 17 The reactions decreased with increased altitude of overflights, and for overflights higher than 18 500 feet in altitude, the panic reactions stopped. Also, smaller groups reacted less strongly 19 than larger groups. One negative effect of the running and avoidance behavior is increased 20 expenditure of energy. For a 90-kilogram animal, the calculated expenditure due to aircraft 21 harassment is 64 kilocalories per minute when running and 20 kilocalories per minute when 22 walking. When conditions are favorable, this expenditure can be counteracted with increased 23 feeding; however, during harsh winter conditions, this may not be possible. Incidental 24 observations of wolves and bears exposed to fixed-wing aircraft and helicopters suggested 25 that wolves were less disturbed than wild ungulates, while grizzly bears showed the greatest 26 response of any animal species observed. 27

It has been proven that low-altitude overflights do induce stress in animals. Increased heart 28 rates, an indicator of excitement or stress, have been found in pronghorn antelope, elk, and 29 30 bighorn sheep. These reactions occur naturally as a response to predation, so infrequent overflights may not, in and of themselves, be detrimental. However, flights at high 31 frequencies over a long period of time may cause harmful effects. The consequences of this 32 disturbance, while cumulative, are not additive. Aircraft disturbance may not cause obvious 33 and serious health effects, but coupled with a harsh winter, it may have an adverse impact. 34 Research has shown that stress induced by other types of disturbances produces long-term 35 decreases in metabolism and hormone balances in wild ungulates. 36

Behavioral responses can range from mild to severe. Mild responses include head raising, body shifting, or turning to orient toward the aircraft. Moderate disturbance may be nervous behaviors, such as trotting a short distance. Escape is the typical severe response.

Marine Mammals. The physiological composition of the ear in aquatic and marine mammals exhibits adaptation to the aqueous environment. These differences (relative to terrestrial species) manifest themselves in the auricle and middle ear (Manci et al. 1988). Some mammals use echolocation to perceive objects in their surroundings and to determine the directions and locations of sound sources (Simmons 1983 in Manci et al. 1988).

- 1 Research conducted on northern fur seals, sea lions, and ringed seals indicated that there are
- 2 some differences in how various animal groups receive frequencies of sound. It was observed
- that these species exhibited varying intensities of a startle response to airborne noise, which
- 4 was habituated over time. The rates of habituation appeared to vary with species,
- 5 populations, and demographics (age, sex). Time of day of exposure was also a factor
- 6 (Muyberg 1978 in Manci et al. 1988).
- 7 Studies accomplished near the Channel Islands were conducted near the area where the
- space shuttle launches occur. It was found that there were some response differences
- 9 between species relative to the loudness of sonic booms. Those booms that were between
- 80 and 89 dBA caused a greater intensity of startle reactions than lower-intensity booms at 72
- to 79 dBA. However, the duration of the startle responses to louder sonic booms was shorter
- (Jehl and Cooper 1980 in Manci et al. 1988).
- 13 Jehl and Cooper indicated that low-flying helicopters, loud boat noises, and humans were the
- most disturbing to pinnipeds (1980). According to the research, although the space launch
- and associated operational activity noises have not had a measurable effect on the pinniped
- population, it also suggests that there was a greater "disturbance level" exhibited during
- 17 launch activities. There was a recommendation to continue observations for behavioral
- effects and to perform long-term population monitoring (Jehl and Cooper 1980).
- 19 The continued presence of single or multiple noise sources could cause marine mammals to
- leave a preferred habitat. However, it does not appear likely that overflights could cause
- 21 migration from suitable habitats because aircraft noise over water is mobile and would not
- 22 persist over any particular area. Aircraft noise, including supersonic noise, currently occurs in
- the overwater airspace of Eglin, Tyndall, and Langley Air Force Bases (AFBs) from sorties
- 24 predominantly involving jet aircraft. Survey results reported in Davis et al. indicate that
- cetaceans (i.e., dolphins) occur under all of the Eglin and Tyndall marine airspace (2000). The
- 26 continuing presence of dolphins indicates that aircraft noise does not discourage use of the
- area and apparently does not harm the locally occurring population.
- In a summary by the National Parks Service on the effects of noise on marine mammals, it was
- determined that gray whales and harbor porpoises showed no outward behavioral response
- 30 to aircraft noise or overflights (1994). Bottlenose dolphins showed no obvious reaction in a
- study involving helicopter overflights at 1,200 to 1,800 feet above the water. They also did
- not show any reaction to survey aircraft unless the shadow of the aircraft passed over them, at
- which point there was some observed tendency to dive (Richardson et al. 1995). Other
- 34 anthropogenic noises in the marine environment from ships and pleasure craft may have
- more of an effect on marine mammals than aircraft noise (Air Force 2000). The noise effects
- on cetaceans appear to be somewhat attenuated by the air/water interface.
- 37 Manatees appear relatively unresponsive to human-generated noise to the point that they
- are often suspected of being deaf to oncoming boats (although their hearing is actually
- similar to that of pinnipeds) (Bullock et al. 1980). Little is known about the importance of
- 40 acoustic communication to manatees, although they are known to produce at least ten
- different types of sounds and are thought to have sensitive hearing (Richardson et al. 1995).

H.2.8.4 Birds

- 2 Auditory research conducted on birds indicates that they fall between reptiles and mammals
- 3 relative to hearing sensitivity. According to Dooling, within the range of 1,000 to 5,000 Hz,
- 4 birds show a level of hearing sensitivity similar to that of the more sensitive mammals (1978).
- 5 In contrast to mammals, bird sensitivity falls off at a greater rate with increasing and
- 6 decreasing frequencies. Passive observations and studies examining aircraft bird strikes
- 7 indicate that birds nest and forage near airports. Aircraft noise in the vicinity of commercial
- 8 airports apparently does not inhibit bird presence and use.
- 9 High-noise events (like a low-altitude aircraft overflight) may cause birds to engage in escape
- or avoidance behaviors, such as flushing from perches or nests (Ellis et al. 1991). These
- activities impose an energy cost on the birds that, over the long term, may affect survival or
- 12 growth. In addition, the birds may spend less time engaged in necessary activities like
- feeding, preening, or caring for their young because they spend time in noise-avoidance
- activity. However, the long-term significance of noise-related impacts is less clear. Several
- studies on nesting raptors have indicated that birds become habituated to aircraft overflights
- and that long-term reproductive success is not affected (Grubb and King 1991; Ellis et al.
- 17 1991). Threshold noise levels for significant responses range from 62 dB for Pacific black
- brant to 85 dB for crested tern (Ward and Stehn 1990; Brown 1990).
- Songbirds were observed to become silent prior to the onset of a sonic boom event (F-111
- jets), followed by "raucous discordant cries." There was a return to normal singing within
- 21 10 seconds after the boom (Higgins 1974 in Manci et al. 1988). Ravens responded by emitting
- 22 protestation calls, flapping their wings, and soaring.
- 23 Manci et al. reported a reduction in reproductive success in some small territorial passerines
- 24 (i.e., perching birds or songbirds) after exposure to low-altitude overflights (1988). However,
- 25 it has been observed that passerines are not driven any great distance from a favored food
- source by a nonspecific disturbance, such as aircraft overflights (USFS 1992). Further study
- 27 may be warranted.
- A recent study, conducted cooperatively between the DoD and the U.S. Fish and Wildlife
- 29 Serve (USFWS), assessed the response of the red-cockaded woodpecker to a range of military
- training noise events, including artillery, small arms, helicopter, and maneuver noise (Pater et
- al. 1999). The project findings show that the red-cockaded woodpecker successfully
- 32 acclimates to military noise events. Depending on the noise level, which ranged from
- innocuous to very loud, the birds responded by flushing from their nest cavities. When the
- noise source was closer and the noise level was higher, the number of flushes increased
- proportionately. In all cases, however, the birds returned to their nests within a relatively
- short period of time (usually within 12 minutes). Additionally, the noise exposure did not
- 37 result in any mortality or statistically detectable changes in reproductive success (Pater et al.
- 1999). Red-cockaded woodpeckers did not flush when artillery simulators were more than
- 39 122 meters away and SEL noise levels were 70 dBA.
- 40 Lynch and Speake studied the effects of both real and simulated sonic booms on the nesting
- and brooding eastern wild turkey in Alabama (1978). Hens at four nest sites were subjected
- 42 to between 8 and 11 combined real and simulated sonic booms. All tests elicited similar
- responses, including guick lifting of the head and apparent alertness for between 10 and
- 44 20 seconds. No apparent nest failure occurred as a result of the sonic booms.

- 1 Twenty-one brood groups were also subjected to simulated sonic booms. Reactions varied
- 2 slightly between groups, but the largest percentage of groups reacted by standing
- motionless after the initial blast. Upon the sound of the boom, the hens and poults fled until
- 4 reaching the edge of the woods (approximately 4 to 8 meters). Afterward, the poults
- 5 resumed feeding activities while the hens remained alert for a short period of time
- 6 (approximately 15 to 20 seconds). In no instances were poults abandoned, nor did they
- 7 scatter and become lost. Every observation group returned to normal activities within a
- 8 maximum of 30 seconds after a blast.

9 **H.2.8.5** Raptors

- In a literature review of raptor responses to aircraft noise, Manci et al. found that most raptors
- did not show a negative response to overflights (1988). When negative responses were
- observed they were predominantly associated with rotor-winged aircraft or jet aircraft that
- were repeatedly passing within 0.5 mile of a nest.
- 14 Ellis et al. performed a study to estimate the effects of low-level military jet aircraft and mid-to
- high-altitude sonic booms (both actual and simulated) on nesting peregrine falcons and
- seven other raptors (common black-hawk, Harris' hawk, zone-tailed hawk, red-tailed hawk,
- golden eagle, prairie falcon, bald eagle) (1991). They observed responses to test stimuli,
- determined nest success for the year of the testing, and evaluated site occupancy the
- 19 following year. Both long- and short-term effects were noted in the study. The results
- 20 reported the successful fledging of young in 34 of 38 nest sites (all eight species) subjected to
- low-level flight and/or simulated sonic booms. Twenty-two of the test sites were revisited in
- the following year, and observations of pairs or lone birds were made at all but one nest.
- Nesting attempts were underway at 19 of 20 sites that were observed long enough to be
- 24 certain of breeding activity. Re-occupancy and productivity rates were within or above
- 25 expected values for self-sustaining populations.
- 26 Short-term behavior responses were also noted. Overflights at a distance of 150 meters or
- less produced few significant responses and no severe responses. Typical responses included
- crouching or, very rarely, flushing from the perch site. Significant responses were most
- 29 evident before egg laying and after young were "well grown." Incubating or brooding adults
- never burst from the nest, thus preventing egg breaking or knocking chicks out of the nest.
- Jet passes and sonic booms often caused noticeable alarm; however, significant negative
- responses were rare and did not appear to limit productivity or re-occupancy. The locations
- of some of the nests may have caused some birds to be habituated to aircraft noise. There
- were some test sites located at distances far from zones of frequent military aircraft usage,
- and the test stimuli were often closer, louder, and more frequent than would be likely for a
- 36 normal training situation.
- Manci et al. noted that a female northern harrier was observed hunting on a bombing range
- in Mississippi during bombing exercises (1988). The harrier was apparently unfazed by the
- 39 exercises, even when a bomb exploded within 200 feet. In a similar case of
- 40 habituation/non-disturbance, a study on the Florida snail-kite stated that the greatest
- reaction to overflights (approximately 98 dBA) was "watching the aircraft fly by." No
- detrimental impacts to distribution, breeding success, or behavior were noted.

Bald Eagle. A study by Grubb and King on the reactions of the bald eagle to human 1 disturbances showed that terrestrial disturbances elicited the greatest response, followed by 2 aquatic (i.e., boats) and aerial disturbances (1991). The disturbance regime of the area where 3 the study occurred was predominantly characterized by aircraft noise. The study found that 4 pedestrians consistently caused responses that were greater in both frequency and duration. 5 Helicopters elicited the highest level of aircraft-related responses. Aircraft disturbances, 6 although the most common form of disturbance, resulted in the lowest levels of response. 7 This low response level may have been due to habituation; however, flights less than 170 8 9 meters away caused reactions similar to other disturbance types. Ellis et al. showed that eagles typically respond to the proximity of a disturbance, such as a pedestrian or aircraft 10 within 100 meters, rather than the noise level (1991). They also noted that helicopters were 11 four times more likely to cause a reaction than a commercial jet and 20 times more likely to 12 cause a reaction than a propeller plane. Fraser et al. have suggested that raptors habituate to 13 overflights rapidly, sometimes tolerating aircraft approaches of 65 feet or less (1985). 14

Osprey. A 1998 study by Trimper et al. in Goose Bay, Labrador, Canada, focused on the reactions of nesting osprey to military overflights by CF-18 Hornets. Reactions varied from increased alertness and focused observation of planes to adjustments in incubation posture. No overt reactions (e.g., startle response, rapid nest departure) were observed as a result of an overflight. Young nestlings crouched as a result of any disturbance until they grew to 1 to 2 weeks prior to fledging. Helicopters, human presence, float planes, and other ospreys elicited the strongest reactions from nesting ospreys. These responses included flushing, agitation, and aggressive displays. Adult osprey showed high nest occupancy rates during incubation regardless of external influences.

- The osprey observed occasionally stared in the direction of the flight before it was audible to the observers. The birds may have been habituated to the noise of the flights; however, overflights were strictly controlled during the experimental period. Strong reactions to float planes and helicopter may have been due to the slower flight and therefore longer duration of visual stimuli rather than noise-related stimuli.
- Red-Tailed Hawk. Andersen et al. conducted a study that investigated the effects of low-level helicopter overflights on 35 red-tailed hawk nests (1989). Some of the nests had not been flown over prior to the study. The hawks that were naïve (i.e., not previously exposed) to helicopter flights exhibited stronger avoidance behavior (nine of 17 birds flushed from their nests) than those that had experienced prior overflights. The overflights did not appear to affect nesting success in either study group. These findings were consistent with the belief that red-tailed hawks habituate to low-level air traffic, even during the nesting period.

H.2.8.6 Migratory Waterfowl

- A study of caged American black ducks was conducted by Fleming et al. in 1996. It was
- determined that noise had negligible energetic and physiologic effects on adult waterfowl.
- 39 Measurements included body weight, behavior, heart rate, and enzymatic activity.
- Experiments also showed that adult ducks exposed to high noise events acclimated rapidly
- and showed no effects.

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- 42 The study also investigated the reproductive success of captive ducks, which indicated that
- duckling growth and survival rates at Piney Island, North Carolina, were lower than those at a

- background location. In contrast, observations of several other reproductive indices (i.e., pair
- 2 formation, nesting, egg production, and hatching success) showed no difference between
- 3 Piney Island and the background location. Potential effects on wild duck populations may
- 4 vary, as wild ducks at Piney Island have presumably acclimated to aircraft overflights. It was
- 5 not demonstrated that noise was the cause of adverse impacts. A variety of other factors,
- 6 such as weather conditions, drinking water and food availability and variability, disease, and
- 7 natural variability in reproduction, could explain the observed effects. Fleming noted that
- 8 drinking water conditions (particularly at Piney Island) deteriorated during the study, which
- 9 could have affected the growth of young ducks. Further research would be necessary to
- determine the cause of any reproductive effects.
- 11 Another study by Conomy et al. exposed previously unexposed ducks to 71 noise events
- per day that equaled or exceeded 80 dBA (1998). It was determined that the proportion of
- time black ducks reacted to aircraft activity and noise decreased from 38 percent to 6 percent
- in 17 days and remained stable at 5.8 percent thereafter. In the same study, the wood duck
- did not appear to habituate to aircraft disturbance. This supports the notion that animal
- response to aircraft noise is species-specific. Because a startle response to aircraft noise can
- result in flushing from nests, migrants and animals living in areas with high concentrations of
- predators would be the most vulnerable to experiencing effects of lowered birth rates and
- recruitment over time. Species that are subjected to infrequent overflights do not appear to
- 20 habituate to overflight disturbance as readily.
- 21 Black brant studied in the Alaskan Peninsula were exposed to jets and propeller aircraft,
- helicopters, gunshots, people, boats, and various raptors. Jets accounted for 65 percent of all
- 23 the disturbances. Humans, eagles, and boats caused a greater percentage of brant to take
- 24 flight. There was markedly greater reaction to Bell-206-B helicopter flights than fixed wing,
- 25 single-engine aircraft (Ward et al. 1986).
- Manci et al. reported that waterfowl were particularly disturbed by aircraft noise (1988). The
- 27 most sensitive appeared to be snow geese. Canada geese and snow geese were thought to
- be more sensitive than other animals such as turkey vultures, coyotes, and raptors (Edwards
- 29 et al. 1979).

H.2.8.7 Wading and Shore Birds

- 31 Black et al. studied the effects of low-altitude (less than 500 feet above ground level) military
- training flights with sound levels from 55 to 100 dBA on wading bird colonies (i.e., great egret,
- snowy egret, tricolored heron, and little blue heron) (1984). The training flights involved
- three or four aircraft, which occurred once or twice per day. This study concluded that the
- 35 reproductive activity—including nest success, nestling survival, and nestling chronology—
- was independent of F-16 overflights. Dependent variables were more strongly related to
- 37 ecological factors, including location and physical characteristics of the colony and
- 38 climatology. Another study on the effects of circling fixed-wing aircraft and helicopter
- overflights on wading bird colonies found that at altitudes of 195 to 390 feet, there was no
- 40 reaction in nearly 75 percent of the 220 observations. Ninety percent displayed no reaction or
- merely looked toward the direction of the noise source. Another 6 percent stood up, 3
- 42 percent walked from the nest, and 2 percent flushed (but were without active nests) and
- returned within 5 minutes (Kushlan 1979). Apparently, non-nesting wading birds had a
- 44 slightly higher incidence of reacting to overflights than nesting birds. Seagulls observed

- roosting near a colony of wading birds in another study remained at their roosts when
- subsonic aircraft flew overhead (Burger 1981). Colony distribution appeared to be most
- directly correlated to available wetland community types and was found to be distributed
- 4 randomly with respect to military training routes. These results suggest that wading bird
- 5 species presence was most closely linked to habitat availability and that they were not
- 6 affected by low-level military overflights (Air Force 2000).
- Burger studied the response of migrating shorebirds to human disturbance and found that
- shorebirds did not fly in response to aircraft overflights, but did flush in response to more
- 9 localized intrusions (i.e., humans and dogs on the beach) (1986). Burger studied the effects of
- noise from JFK Airport in New York on herring gulls that nested less than 1 kilometer from the
- airport (1981). Noise levels over the nesting colony were 85 to 100 dBA on approach and 94
- to 105 dBA on takeoff. Generally, there did not appear to be any prominent adverse effects of
- subsonic aircraft on nesting, although some birds flushed when a Concorde flew overhead
- and, when they returned, engaged in aggressive behavior. Groups of gulls tended to loaf in
- the area of the nesting colony, and these birds remained at the roost when the Concorde flew
- overhead. Up to 208 of the loafing gulls flew when supersonic aircraft flew overhead. These
- birds would circle around and immediately land in the loafing flock (Air Force 2000).
- In 1970, sonic booms were potentially linked to a mass hatch failure of Sooty Terns on the
- 19 Dry Tortugas (Austin et al. 1970). The cause of the failure was not certain, but it was
- 20 conjectured that sonic booms from military aircraft or an overgrowth of vegetation were
- factors. In the previous season, Sooties were observed to react to sonic booms by rising in a
- 22 "panic flight," circling over the island, and then usually settling down on their eggs again.
- Hatching that year was normal. Following the 1969 hatch failure, excess vegetation was
- cleared and measures were taken to reduce supersonic activity. The 1970 hatch appeared to
- 25 proceed normally. A colony of Noddies on the same island hatched successfully in 1969, the
- year of the Sooty hatch failure.
- 27 Subsequent laboratory tests of exposure of eggs to sonic booms and other impulsive noises
- 28 (Bowles et al. 1991; Bowles et al. 1994; Cogger and Zegarra 1980) failed to show adverse
- effects on the hatching of eggs. A structural analysis (Ting et al. 2002) showed that, even
- under extraordinary circumstances, sonic booms would not damage an avian egg.
- 31 Burger observed no effects of subsonic aircraft on herring gulls in the vicinity of JFK
- 32 International Airport (1981). The Concorde aircraft did cause more nesting gulls to leave their
- nests (especially in areas of higher density of nests), causing the breakage of eggs and the
- scavenging of eggs by intruder prey. Clutch sizes were observed to be smaller in areas of
- higher-density nesting (presumably due to the greater tendency for panic flight) than in areas
- where there were fewer nests.

H.2.8.8 Fish, Reptiles, and Amphibians

- The effects of overflight noise on fish, reptiles, and amphibians have been poorly studied, but
- 39 conclusions regarding their expected responses have involved speculation based upon
- 40 known physiologies and behavioral traits of these taxa (Gladwin et al. 1988). Although fish do
- startle in response to low-flying aircraft noise, and probably to the shadows of aircraft, they
- have been found to habituate to the sound and overflights. Reptiles and amphibians that
- respond to low frequencies and those that respond to ground vibration, such as spadefoots

- 1 (genus Scaphiopus), may be affected by noise. Limited information is available on the effects
- of short-duration noise events on reptiles. Dufour in 1980 and Manci et al. in 1988,
- 3 summarized a few studies of reptile responses to noise. Some reptile species tested under
- 4 laboratory conditions experienced at least temporary threshold shifts or hearing loss after
- 5 exposure to 95 dB for several minutes. Crocodilians in general have the most highly
- 6 developed hearing of all reptiles. Crocodile ears have lids that can be closed when the animal
- 7 goes under water. These lids can reduce the noise intensity by 10 to 12 dB (Wever and
- 8 Vernon 1957). On Homestead Air Reserve Station, Florida, two crocodilians (the American
- 9 Alligator and the Spectacled Caiman) reside in wetlands and canals along the base runway
- suggesting that they can coexist with existing noise levels of an active runway including DNLs
- 11 of 85 dB.

H.2.8.9 Summary

- Some physiological/behavioral responses such as increased hormonal production, increased
- 14 heart rate, and reduction in milk production have been described in a small percentage of
- studies. A majority of the studies focusing on these types of effects have reported short-term
- or no effects.
- 17 The relationships between physiological effects and how species interact with their
- environments have not been thoroughly studied. Therefore, the larger ecological context
- issues regarding physiological effects of jet aircraft noise (if any) and resulting behavioral
- 20 pattern changes are not well understood.
- 21 Animal species exhibit a wide variety of responses to noise. It is therefore difficult to
- 22 generalize animal responses to noise disturbances or to draw inferences across species, as
- reactions to jet aircraft noise appear to be species-specific. Consequently, some animal
- species may be more sensitive than other species and/or may exhibit different forms or
- intensities of behavioral responses. For instance one study suggests that wood ducks appear
- to be more sensitive and more resistant to acclimation to jet aircraft noise than Canada geese.
- 27 Similarly, wild ungulates seem to be more easily disturbed than domestic animals.
- The literature does suggest that common responses include the "startle" or "fright" response
- and, ultimately, habituation. It has been reported that the intensities and durations of the
- 30 startle response decrease with the numbers and frequencies of exposures, suggesting no
- 31 long-term adverse effects. The majority of the literature suggests that domestic animal
- species (cows, horses, chickens) and wildlife species exhibit adaptation, acclimation, and
- habituation after repeated exposure to jet aircraft noise and sonic booms.
- Animal responses to aircraft noise appear to be somewhat dependent on, or influenced by,
- 35 the size, shape, speed, proximity (vertical and horizontal), engine noise, color, and flight
- 36 profile of planes. Helicopters also appear to induce greater intensities and durations of
- disturbance behavior as compared to fixed-wing aircraft. Some studies showed that animals
- that had been previously exposed to jet aircraft noise exhibited greater degrees of alarm and
- disturbance to other objects creating noise, such as boats, people, and objects blowing across
- 40 the landscape. Other factors influencing response to jet aircraft noise may include wind
- direction, speed, and local air turbulence; landscape structures (i.e., amount and type of
- vegetative cover); and, in the case of bird species, whether the animals are in the
- 43 incubation/nesting phase.

H.2.9 Property Values

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- 2 There are a number of factors that affect property values, which makes predicting impacts
- difficult. Factors directly related to the property, such as size, improvements, and location of
- 4 the property, as well as current conditions in the real estate market, interest rates, and
- 5 housing sales in the area are more likely to have a direct adverse impact on property values.
- 6 Several studies have analyzed property values as they relate to military and civilian aircraft
- 7 noise. In one study, a regression analysis of property values as they relate to aircraft noise at
- 8 two military installations was conducted (Fidell et al. 1996). This study found that, while
- 9 aircraft noise at these installations may have had minor impacts on property values, it was
- difficult to quantify that impact. Other factors such, as the quality of the housing near the
- installations and the local real estate market, had a larger impact on property values.
- 12 Therefore, the regression analysis was not able to predict the impact of aircraft noise on the
- property values of two comparable properties.
- 14 Another study analyzed 33 other studies attempting to quantify the impact of noise on
- property values (Nelson 2003). The result of the study supports the idea that the potential for
- an adverse impact on property values as a result of aircraft noise exists and estimates that the
- value of a specific property could be discounted between 0.5 and 0.6 percent per decibel
- when compared to a similar property that is not impacted by aircraft noise. Additional data
- indicates that the discount for property values as a result of noise would be higher for noise
- 20 levels above 75 dB DNL.

H.2.10 Subsonic Aircraft Noise Effects on Structures

- Normally, the most sensitive components of a structure to airborne noise are the windows
- 23 and, infrequently, the plastered walls and ceilings. An evaluation of the peak sound pressures
- impinging on the structure is normally sufficient to determine the possibility of damage. In
- 25 general, at sound levels above 130 dB, there is the possibility of the excitation of structural
- component resonance. While certain frequencies (such as 30 Hz for window breakage) may
- be of more concern than other frequencies, conservatively, only sounds lasting more than
- one second above a sound level of 130 dB are potentially damaging to structural components
- 29 (CHABA 1977). A study directed specifically at low-altitude, high-speed aircraft showed that
- there is little probability of structural damage from such operations (Sutherland 1989). One
- finding in that study is that sound levels at damaging frequencies (e.g., 30 Hz for window
- breakage or 15 to 25 Hz for whole-house response) are rarely above 130 dB.
- Noise-induced structural vibration may also cause annoyance to dwelling occupants because
- of induced secondary vibrations, or "rattle," of objects within the dwelling, such as hanging
- pictures, dishes, plaques, and bric-a-brac. Window panes may also vibrate noticeably when
- exposed to high levels of airborne noise, causing homeowners to fear breakage. In general,
- 37 such noise-induced vibrations occur at sound levels above those considered normally
- incompatible with residential land use. Thus assessments of noise exposure levels for
- compatible land use should also be protective of noise-induced secondary vibrations.

H.2.11 Subsonic Aircraft Noise Effects on Structure and Terrain

- 2 Members of the public often believe that noise from low-flying aircraft can cause avalanches
- or landslides by disturbing fragile soil or snow structures in mountainous areas. There are no
- 4 known instances of such effects, and it is considered improbable that such effects will result
- 5 from routine, subsonic aircraft operations.

6 H.2.12 Noise Effects on Historical and Archaeological Sites

- 7 Because of the potential for increased fragility of structural components of historical buildings
- and other historical sites, aircraft noise may affect such sites more severely than newer,
- 9 modern structures. Most scientific studies of the effects of noise and vibration on historic
- properties have considered potential impacts on standing architecture. For example, the FAA
- published a study of potential impacts resulting from vibrations caused by the noise of
- subsonic Concorde overflights on five historic properties, including a restored plantation
- house, a stone bridge and tollhouse, and other structures (Hershey, Kevala, and Burns 1975).
- 14 This study analyzed the breakage probabilities of structural elements that might be
- considered susceptible to vibration, such as window glass, mortar, and plaster. The results
- indicated that, with the exception of some already cracked window glass, there was no
- practical risk of noise-induced vibration damage to any of these structures.
- Some studies of the effects of overflights—both subsonic and supersonic—on archaeological
- structures and other types of sites also have been published. Battis examined the effects of
- low-altitude overflights of B-52, RF-4C, and A-7 aircraft on standing walls at Long House Ruin
- in northeastern Arizona (Battis 1988). The motion levels observed during all passes were well
- below a conservative threshold for vibration in ancient structures, a level of 1.3 millimeters
- 23 per second, established by two previous studies. Battis concluded that vibration associated
- 24 with aircraft overflights at speeds and altitudes similar to those measured in his study
- 25 had/would have no significant damaging effect on Long House and similar sites.
- 26 Two Air Force-sponsored studies have included research into potential effects of supersonic
- 27 overflight on "nonstructural" archaeology and unconventional structures. One study
- included historic buildings, prehistoric structures, water tanks, archaeological cave/shelter
- 29 sites and rock art, and seismically sensitive areas such as avalanche and mud/rock slide areas
- 30 (Sutherland, Brown, and Goerner 1990). That study compared overpressure associated with
- different types of aircraft in supersonic flight at different altitudes with failure or damage
- 32 stress values for these types of sites. The authors concluded that overpressures generated by
- 33 supersonic overflight were well below established damage thresholds. Subsonic
- operations—which were not included in this study—would be even less likely to cause
- 35 damage.
- 36 Battis also completed a study that examined the potential for damage by sonic booms to rock
- 37 shelter and petroglyph sites located within the Valentine Military Operations Area (MOA) in
- 38 Texas (Battis 1983). The Texas State Historic Preservation Office (SHPO) helped design and
- 39 participated in this study, which involved taking measurements at a rock shelter site and at a
- 40 field of petroglyphs-bearing boulders during supersonic overflights. The peak overpressure
- for booms generated during supersonic operations over the Valentine MOA was 5.2 psf. The
- lower limit (the least amount of pressure needed) for damaging rock was measured in the
- laboratory at 2.1×104 psf, 4,000 times the peak overpressure measured during the study.

- 1 Air Force National Environment Policy Act documents have examined the potential impacts
- on historic properties that might result from subsonic and supersonic overflights. In 1995, the
- 3 Air Force published the Environmental Assessment for Continued Supersonic Operations in
- 4 the Black Mountain Supersonic Corridor and the Alpha/Precision Impact Range Area. Eligible
- 5 and potentially eligible cultural resources in the area of potential effect include petroglyph
- and pictograph panels located on a variety of rock types, historic adobe and non-adobe
- 5 structures with standing walls, and historic mines (which contain tunnels) and wells. The
- 8 report concludes that supersonic low-altitude flights have occurred over these corridors for
- 9 25 years or more and have resulted in no significant impacts on cultural resources. The
- 10 California SHPO agreed, and during National Historic Preservation Act Section 106 review of
- this undertaking, concurred with the Air Force's finding that continued supersonic overflights
- would have no effect on historic properties.
- 13 As noted above for the noise effects of noise-induced vibrations on normal structures,
- assessments of noise exposure levels for normally compatible land uses should also be
- protective of historic and archaeological sites.

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H.3 NOISE MODELING METHODOLOGY USED IN GLI EIS

- 17 Noise modeling for the GLI EIS was conducted based on operations parameters contained in
- Section 2.3.2 in the EIS and inputs from 1 Special Operations Wing (SOW) and Florida Forest
- 19 Service points of contact. Where operational details cannot be known due to the highly
- variable nature of the proposed training, conservative assumptions were made to avoid
- 21 under-estimating impacts. Methods, known operational parameters, and assumptions used
- in calculating noise levels are described below.

H.3.1 Aircraft Noise Modeling Methods

- 24 An aircraft in subsonic flight generally emits noise from two sources: the engines and flow
- 25 noise around the airframe. Noise generation mechanisms are complex and, in practical
- 26 models, the noise sources must be based on measured data. The Air Force has developed a
- series of computer models and aircraft noise databases for this purpose. The models include
- NOISEMAP (Moulton 1992) and Rotorcraft Noise Model (RNM) (Wyle Laboratories 2002) for
- 29 noise around airbases or in areas where operations would follow a definable path. The
- 30 program MOA-Range NOISEMAP (MR_NMAP) (Lucas and Calamia 1996) was created for
- estimating noise levels in MOAs, ranges, and low-level training routes. The programs
- NOISEMAP and MRNMAP use the NOISEFILE database developed by the Air Force. NOISEFILE
- data includes SEL and L_{max} as a function of speed and power setting for aircraft in straight
- 34 flight. The program RNM uses a separate measured source noise dataset which accounts for
- 35 the high degree of sound level variability at different angles from the nose of the aircraft.
- Noise from an individual aircraft is a time-varying continuous sound. It is first audible as the
- aircraft approaches, increases to a maximum when the aircraft is near its closest point, then
- diminishes as it departs. The noise depends on the speed and power setting of the aircraft
- 39 and its trajectory. NOISEMAP divides the trajectory into segments whose noise can be
- 40 computed from the data in NOISEFILE. The contributions from these segments are summed.

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- Operational points of contact estimated that for all GLI training event types approximately 20
- percent of operations occur after 10 p.m. and before 7 a.m. As described in Section H.1.2.4,
- operations after 10 p.m. and before 7 a.m. are assessed a noise 'penalty' in calculation of the
- 4 noise metric Day-Night Average sound Level (DNL) because noise in this time period is
- 5 generally more intrusive.

H.3.1.1 Noise Modeling Method for Helicopter Landing Zones (HLZs) and Drop Zones (DZs)

Several different aircraft types would use the HLZs. Because the percent of total use by each aircraft type is not known, the loudest aircraft type was used as a noise surrogate for all aircraft types. Aircraft noise levels were compared for the aircraft while operating in the loudest configuration (e.g., power setting, airspeed, etc.) that would be commonly used while operating over the state forests. The CV-22 would be the type of rotorcraft used most commonly at the HLZ/DZs. When operating at 60 degrees nacelle tilt, the CV-22 is louder than the other rotorcraft types expected to be frequently involved in GLI training while they are operating in common training configurations (see Table 3-9 in Section 3.3.3 of the EIS).

To model conservatively, it was assumed that all noise would be concentrated along a single flight path. In fact, noise would be distributed across a range of possible inbound and outbound paths and time-average noise levels would be lower at any given location than those presented in the EIS. CV-22 typical approaches profiles created based on the "Approach Pattern" published in AFTTP 3-3 CV-22 and departure flight profile based on data gathered from a V-22 pilot. CV-22 flight profiles used in noise modeling are shown in Figure H-7.

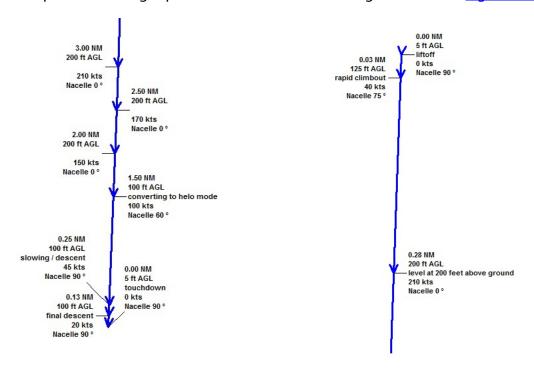


Figure H-7. CV-22 Approach to HLZ/DZ and Departure from HLZ/DZ Flight Profiles

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Table H-4. CV-22 Weighted Average Number of Aircraft Per Sortie

# Aircraft	% Total Sorties
4	2%
2	49%
1	49%
Weighted Average Number of Aircraft	1.55

- 3 Dividing all operations equally among all 17 proposed HLZ/DZs in BRSF would mean that 17
- 4 HLZ/DZs would have to be available at all times for training purposes. Putting all operations
- at one HLZ/DZ seemed very unrealistic, as it would not meet the purpose and need of
- 6 providing training variability. As a middle ground, it was assumed that 5 HLZ/DZs would be
- active at any given time, and modeled operations would be split among these five HLZ/DZs.
- 8 To accurately capture variable noise directivity (i.e., noise level varies by degrees off nose of
- 9 aircraft AND aircraft nose direction varies for each hover event), hovering was modeled as CV-
- 10 22 flying slowly around a circular track with a radius of 75 feet. Time spent on the ground
- with engines running was modeled as "hover" at 5 AGL.
- 12 Low Level Helicopter Insertion/Extraction (LLHI/E). These operations would take place
- approximately two times per month. It was assumed that, on average, two aircraft would
- participate in each event. It was assumed that 5 minutes would be spent conducting each
- circling pattern and 10 minutes would be spent conducting each upwind/downwind pattern.
- Average total time for each training event is 75 minutes, with time split evenly between
- 17 hovering and closed patterns. Twenty percent of hovering time would be spent on the
- ground, with the remaining hover time split evenly between 75 AGL, 35 AGL and 15 AGL.
- 19 **Air Drop (AD).** Airdrop operations would take place approximately four times per day on 232
- days per year. Multiple aircraft types would use the DZs. The C-130 was used as noise
- surrogate for all types. Although the C-17 is slightly louder than the C-130, it was estimated
- 22 that the C-17 would conduct airdrops once or twice per year. Operations were modeled
- 23 conducting drops from 500 AGL at 165 knots and 86 % NC. Airdrops would occur at 500 AGL
- and 700 C TIT engine power.
- 25 Air/Land Vertical Lift (A/LVL). A/LVL operations would take place approximately four times
- per day, 232 days per year. It was assumed that Air/Land Vertical Lift training events would
- spend the same amount of training time in configurations as described above for Low Level
- Helicopter Insertion/Extraction training. In addition to training at the HLZ/DZs, A/LVL
- 29 operations would also take place at the airstrips.
- 30 Table H-7 in Section H.3.1.5 shows the frequency of each of the operations types mentioned
- above for the HLZ/DZs. As previously mentioned, it was assumed that 5 HLZ/DZs would be
- 32 operational at a time.

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H.3.1.2 Noise Modeling Method for Airstrips

- 34 Several aircraft types would be used for LAPT training at the airstrips. Characteristics of
- aircraft types proposed to be used in training (see Table H-5) were compared to similar

- aircraft types available in DoD database of aircraft noise levels (see Table H-6). The C-23
- 2 Sherpa was selected as the surrogate noise source because it would be expected to be only
- 3 slightly louder than the loudest of the training aircraft, based on the horsepower and number
- 4 of engines with which it is equipped. Selection of a noise surrogate aircraft slightly louder
- 5 than the training aircraft yields conservative analysis results.

Table H-5. Aircraft Proposed for Use in LAPT

Aircraft	# of Engines	Engine Type	Horsepower per Engine
CASA-212	2	TPE331-10R-513C	900
PC-12	2	P+W PT6A-42 turboprops	850
C-145/ M-28 Skytruck	2	P+W PT6A-65B turboprops	1,100

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Table H-6. Potential Surrogates in NOISEMAP

Aircraft	# of Engines	Engine Type	Horsepower per Engine
Beech Baron 58P	2	Continental IO-470L piston	260
C-23 Sherpa	2	P+W PT6A-45-R turboprop	1,198
Cessna 441 Conquest	2	Garrett TPE331-8-403S turboprops	636
T-6 Texan (JPATS)	1	P+W R-1340-AN-1	600
C-7 (DHC-4 Caribou)	2	P+W R20007M2	1,450

- 8 Flight tracks, altitude, engine power and airspeed would vary by aircraft type and operation
- 9 type. To model conservatively, it was assumed that all operations would be concentrated on
- a single straight-in track for arrivals and on a single straight-out track for departures. At
- Muson/Blackwater Airstrip, aircraft would arrive from and take off to the north while utilizing
- the northern half of the runway. This restriction on operations would shift noise away from
- the Munson Recreation Area that is located just south of the airstrip. For aircraft operations at
- proposed airstrips, it was assumed that arrivals and departures would occur equally from each direction of the airstrip.
- Standard aircraft profiles (i.e., altitude, engine power, and airspeed) for C-23 were used in
- 17 modeling, except that the standard C-23 takeoff roll was shortened so that rotation would
- occur before the airstrip ends. Standard aircraft climb rates are for average aircraft loading.
- 19 LAPT aircraft would always be light. Use of the standard profile puts aircraft slight lower
- 20 and/or at higher engine power setting, which is also a conservative assumption. Flight
- 21 profiles used in noise modeling of noise at the airstrips are shown in Figure H-8.

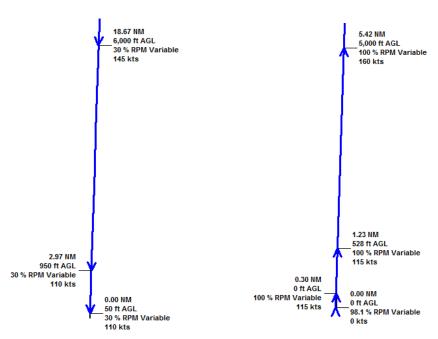


Figure H-8. C-23 Approach to Airstrip and Departure from Airstrip Flight Profiles

In addition to LAPT training, the airstrips will also support A/LVL training. A/LVL training was modeled as being split evenly between the five active HLZ/DZs and the airstrip(s) (three airstrips in BRSF and one airstrip in THSF) in each state forest. Table H-7 in Section H.3.1.5 shows the frequency of each of the operations types that would occur at the airstrips. BRSF will have three airstrips that will be used for training and THSF will have one airstrip that will be used for training.

H.3.1.3 Noise Modeling Method for Overwater Hoist Operations

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Overwater Hoist Operations would occur approximately once per month and would last for approximately 20 minutes. V-22 aircraft, which would conduct the majority of training operations were used as surrogate noise source aircraft. CV-22 aircraft typically hover at approximately 80 feet AGL during the training event. Table H-9 in Section H.3.1.5 shows the frequency of the OHOs. The number of locations to be used for OHO is unknown. As a conservative estimate, it was assumed that all operations would occur at the same location.

H.3.1.4 Noise Modeling Method for Distributed Flying Operations

Aircraft would maneuver to and from designated training locations used variable flight paths. 17 Noise levels associated with these maneuvers were modeled using the program MRNMAP. 18 Operations were distributed evenly across the modeled area with the same acreage as BRSF. 19 The same method was applied to THSF. In order to account for more frequent use of certain 20 21 areas within the state forests, several conservative operational assumptions were made during noise modeling. The C-23 was used as a surrogate for Light Aviation Proficiency 22 Training, the C-17 as a surrogate for Airdrop, and H-47 as a surrogate for all other ops (V-22 is 23 not available in MRNMAP available aircraft noise database; H-47 has similar noise level and 24 would be used in some GLI events). Table H-10 in Section H.3.1.5 shows the frequency 25 distributed flying operations. 26

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H.3.1.5 Operations Frequency

- 2 The tables below show the operations frequency for the various training type that would
- occur in BRSF and THSF. <u>Table H-7</u> shows the different event types that occur at the HLZ/DZs
- and the frequency of each training event type. <u>Table H-8</u> shows the frequency of operations
- at the airstrips. <u>Table H-9</u> shows the frequency of OHOs. <u>Table H-10</u> shows the frequency
- 6 aircraft flying to and from training events within BRSF and THSF.

Table H-7. Frequency of Operations at the HLZ/DZs

Event	Operations Frequency	Total Events per AAD¹	Avg # Aircraft per Event	% Total Events at each HLZ/DZ ²	Day Sorties (80%)³	Night Sorties (20%)³	Avg # of Approaches per Event
LLHI/E	2X/mo	0.066	1.55	20%	0.016	0.004	1
Airdrop	4X/day on 232 days per year	2.542	1	20%	0.407	0.102	1
A/LVL	4X/day on 232 days per year	2.542	1.55	13%	0.394	0.099	1

AAD= Average Annual Day; A/LVL= Air/Land Vertical Lift; LLHI/E= Low Level Helicopter Insertion/Extraction.

- 1 Operations per AAD calculated by dividing total annual operations by 365; GLI training would occur on up to 232 days per year above threshold number of days for use of AAD IAW DoDI 4165.57.
- 2 The most popular HLZ/DZ at BRSF/THSF assumed to be location for 20% of total HLZ/DZ operations. A/LVL would also be conducted at the three proposed airstrips for total of 8. For THSF, all operations at the airstrips were combined and added to the one airstrip.
- 3 Approximately 20% of total operations would occur in 2200-0700 hours for all event types.

Table H-8. Frequency of Operations at Airstrips

Event¹	Operations Frequency	Total Events per AAD¹	Avg # Aircraft per Event	Avg # of Approaches per Event	BRSF % Total Ops at "Most Popular" Airstrip	Ops per AAD at each BRSF Airstrip	BRSF Day Sorties (80%) ²	BRSF Night Sorties (20%) ²
LAPT ³	5X/day on 232 days per year	3.178082	1	1	0.33	1.049	0.839	0.210
Event¹	Operations Frequency	Total Events per AAD¹	Avg # Aircraft per Event	Avg # of Approaches per Event	THSF % Total Ops at "Most Popular" Airstrip	Ops per AAD at each THSF Airstrip	THSF Day Sorties (80%) ²	THSF Night Sorties (20%) ²
LAPT ³	5X/day on 232 days per year	3.178082	1	1	1	3.178	2.542	0.636

AAD= Average Annual Day; A/LVL= Air/Land Vertical Lift; LAPT= Light Aviation Proficiency Training.

- 1 A/LVL will have the same frequency of operations at the airstrips as listed under <u>Table H-7</u>.

 Operations per AAD calculated by dividing total annual operations by 365; GLI training would occur on up to 232 days per year above threshold number of days for use of AAD IAW DoDI 4165.57.
- 2 Approximately 20% of total operations would occur in 2200-0700 hours for all event types.
- 3 25% of sorties remain at 13,000 20,000 MSL and do not use airstrips; 100% modeled using airstrips to ensure no underrepresentation.

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Table H-9. Frequency of Overwater Hoist Operations (OHO)

Event	Operations Frequency	Total Events per AAD¹	Avg # Aircraft per Event	# of Locations ²	Total Operations	Day Sorties (80%)³	Night Sorties (20%) ³
OHO†	1 per month	0.033	1.55	1	0.051	0.041	0.010

AAD= Average Annual Day; OHO= Overwater Hoist Operation.

- 1 Operations per AAD calculated by dividing total annual operations by 365; GLI training would occur on up to 232 days per year above threshold number of days for use of AAD IAW DoDI 4165.57.
- 2 Approximately 20% of total operations would occur in 2200-0700 hours for all event types.
- 3 Number of locations to be used for OHO is not known; it was assumed all operations would occur at one location.

Table H-10. Frequency of Distributed Flying Operations

Event	Day Sorties per AAD (80%) ^{1,2}	Night Sorties per AAD (20%) ^{1,2}	Daytime Annual Operations	Nighttime Annual Operations
LAPT	2.54	0.64	928	232
Air Drop	2.03	0.51	742	186
HLZ/DZ and OHO	3.27	0.82	1195	299

AAD= Average Annual Day; LAPT= Light Aviation Proficiency Training; HLZ/DZ= Helicopter Landing Zone/ Drop Zone; OHO= Overwater Hoist Operation.

- 1 Operations per AAD calculated by dividing total annual operations by 365; GLI training would occur on up to 232 days per year above threshold number of days for use of AAD IAW DoDI 4165.57.
- 2 Daytime and nighttime sorties were calculated by multiplying the total events per AAD by the number of aircraft per event by the percent day/night (see <u>Table H-7</u>, <u>Table H-8</u>, and <u>Table H-9</u>).

3 H.3.2 Munitions Noise Modeling Methods

- The programs BNOISE2 and Small Arms Range Noise Assessment Model (SARNAM) calculate noise levels generated by large arms and small arms, respectively. Large arms are defined as
- being weapons firing rounds 20 mm or larger, while small arms are defined as weapons firing
- 6 Defing weapons filling rounds 20 min of larger, while small arms are defined as weapons filling
- 7 projectiles less than 20 mm in diameter. Both BNOISE2 and SARNAM calculate munitions
- 8 noise based on recorded noise levels for several weapon and projectile types using a series of
- 9 noise propagation algorithms. Calculations include the muzzle blast as well as the shockwave
- generated by the projectile, which often travels at faster than the speed of sound. The
- programs are capable of generating several noise metrics including CDNL and peak noise
- 12 level.

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- Because it is not known how widely munitions training would be spaced out, training areas
- were treated as if all activities would occur at one point on the ground at each training
- location. It was assumed that training events would be evenly distributed between two
- hardened campsites within BRSF. At THSF, it is not known how training will be distributed,
- and it was also assumed that there would be two training locations. Noise levels are based on
- the listener being 90 degrees offset from muzzle of the gun (i.e., perpendicular to the noise
- 19 source and the target).
- 20 Army Regulation 200-1 discourages noise-sensitive land use where large arms noise exceeds
- 21 62 dB CDNL and strongly discourages noise-sensitive land uses where large-arms noise
- exceeds 70 dB CDNL. As described in Army Regulation 200-1, noise-sensitive land use where
- small-arms noise exceeds 87 dB PK 15(met) (i.e., peak noise level) is discouraged and noise-

sensitive land uses where small-arms noise exceeds 104 dB PK 15(met) is strongly 1 discouraged. 2

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APPENDIX I MEMORANDA OF AGREEMENT

I. MEMORANDA OF AGREEMENT

I.1 AIR FORCE, FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, & FLORIDA FOREST SERVICE (MILITARY TRAINING ON STATE LANDS)

MEMORANDUM OF AGREEMENT BETWEEN
THE DEPUTY ASSISTANT SECRETARY OF THE AIR FORCE FOR INSTALLATIONS
PENTAGON, WASHINGTON, D.C. 20330
AND

FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES
FLORIDA FOREST SERVICE
TALLAHASSEE, FL 32399
FOR THE PROVISION OF MILITARY TRAINING ON STATE LANDS

THIS MEMORANDUM OF AGREEMENT (hereafter, the "Agreement") is made and entered into this ____ day of October, 2012 by and between Office of the Assistant Secretary of the Air Force for Installations (hereinafter, "Air Force") and Florida Department of Agriculture and Consumer Services,

Florida Forest Service (hereinafter, "Florida Forest Service") which collectively are the "Parties".

WITNESSETH:

WHEREAS, the Air Force, in order to successfully accomplish mission requirements, has a need for expanded training opportunities in Northwest Florida beyond the current Department of Defense lands and training areas, and

WHEREAS, the Florida Forest Service is responsible for managing, protecting, maintaining and developing Florida State forests and support sites, and

WHEREAS, the Parties have mutually concluded that it is desirable, practicable, and beneficial for the Parties to enter this Agreement to the mutual benefit of both and the goal is to work together in an effort to enhance both Parties' ability to carry out their respective missions,

- Military training operations on Florida State forest managed lands and support sites can be compatible to achieve the Parties's objectives without unreasonable impacts to resources if conducted with the proper planning and coordination.
- Within 60 days of enactment of this Agreement, Florida Forest Service personnel and Air Force personnel will work together to develop a detailed "Annual Operations Plan" that:
 - a. Establishes a-framework through which military training exercises may be conducted on State-owned lands managed as state forests and support sites. This framework may include other appropriate instruments within the jurisdiction of both Parties.
 - b. Identifies number and locations of compatible available sites in the Northwest Florida region, to be defined as "training sites".
 - c. Provides detailed maps showing boundaries delineating training areas.
 - d. Details limitations of liability between the parties.
 - e. Estimates the frequency of use of the sites.
 - f. Indicates the types of compatible training allowed and the training activities that are expected to be prohibited.
 - g. Establishes procedures for requesting, cancelling, coordinating and notification of the use of training sites.

- h. Identifies options for compensation or reimbursement for the Florida Forest Service providing lands for training through cash payment or in-kind services.
- i. Establishes a feedback mechanism to assess the usefulness of the training site for the Air Force and the impact, if any, upon the mission of the Florida Forest Service.
- j. Identifies and clarifies the Air Force's responsibility with regard to the National Environmental Policy Act (NEPA).

3. This Agreement shall become effective upon the date first annotated above, and shall remain in full force and effect until cancelled by mutual agreement of the Parties, or upon the provision of at least sixty (60) days advance written notice from the Party desiring to terminate this Agreement to the other Party. Upon becoming effective, this Agreement shall supersede all previous agreements between the Parties on the same subject.

IN WITNESS WHEREOF, authorized representatives of the Parties have affixed their signatures hereto, in recognition and acceptance of the terms, conditions and obligations set forth and or assumed under this Agreement.

Florida Department of Agriculture and
Consumer Services:

Adam H. Putnam, Confinissioner

Kathleen I. Ferguson, P.E.
Principal Deputy Assistant Secretary
(Installations, Environment & Logistics)

Pentagon, Washington, D.C.

Florida Department of Agriculture and Consumer Services, Florida Forest Service

James R. Karels, Director

DATE: 10/23/12

I.2 AIR FORCE, FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (MILITARY COMMUNICATIONS EQUIPMENT ON STATE LANDS)

MEMORANDUM OF AGREEMENT BETWEEN
THE PRINCIPAL DEPUTY ASSISTANT SECRETARY OF THE AIR FORCE FOR
INSTALLATIONS, ENVIRONMENT AND LOGISTICS
PENTAGON, WASHINGTON, D.C. 20330

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION TALLAHASSEE, FL 32399

FOR THE DEPLOYMENT OF MILITARY COMMUNICATIONS EQUIPMENT ON STATE LANDS

THIS MEMORANDUM OF AGREEMENT (hereafter, "Agreement") is made and entered into this 10 years and of December, 2012, by and between Office of the Assistant Secretary of the Air Force for Installations (hereinafter, "Air Force") and Florida Department of Environmental Protection (hereinafter, "Department") which collectively are the "Parties".

WITNESSETH:

WHEREAS, the Air Force, in order to successfully accomplish mission requirements, has a need for expanded operations in Northwest Florida beyond the current Department of Defense lands; and

WHEREAS, the Department is responsible for managing, protecting, maintaining and developing Florida's state parks and coastal and aquatic managed areas; and

WHEREAS, the Parties have mutually concluded that it is desirable, practicable and beneficial for the Parties to enter this Agreement for the mutual benefit of both, the goal of which is to work together in an effort to enhance both Parties' ability to carry out their respective missions,

- Deploying non-hazardous, no-impact military communications equipment on Departmentmanaged lands can be conducted in a way that achieves the objectives of the Parties without impacts to the natural and cultural resources and public recreational use of these lands if done with proper planning and coordination.
- 2. Within 60 days of execution of this Agreement, Department personnel and Air Force personnel will work together to develop a detailed plan that:
 - Establishes a framework through which non-hazardous, no-impact military
 communications equipment, referred to as threat emitters, can be positioned on Stateowned lands that are managed as state parks and coastal and aquatic managed areas.
 This framework may include the development of appropriate written instruments to
 authorize such activities within these lands.
 - b. Identifies those managed areas in the Northwest Florida region and the specific sites within each area where threat emitters can be deployed, to be defined as "deployment sites".
 - Provides detailed maps delineating the specific location and boundary of deployment sites
 - d. Expresses the limitations of liability by the Parties.
 - e. Identifies the term during which the deployment sites will be used.

- Establishes procedures for coordinating the use of deployment sites between the Parties.
- g. Identifies options for compensation or reimbursement to the Department for providing lands for use as deployment sites, through cash payment or in-kind services.
- h. Establishes a feedback mechanism to assess the usefulness of the deployment sites for the Air Force and the impacts, if any, upon the mission of the Department.
- i. Identifies and clarifies the Air Force's responsibility with regard to the National Environmental Policy Act (NEPA).

3. This Agreement shall become effective upon the date first annotated above, and shall remain in full force and effect until cancelled by mutual agreement of the Parties, or upon the provision of at least sixty (60) days advance written notice from the Party desiring to terminate this Agreement to the other Party. Upon becoming effective, this Agreement shall supersede all previous agreements between the Parties on the same subject.

IN WITNESS WHEREOF, authorized representatives of the Parties have affixed their signatures hereto, in recognition and acceptance of the terms, conditions and obligations set forth and/or assumed under this Agreement.

Florida Department of Environmental Protection:

Herschel T. Vinyard Jr., Secretary

Department of the Air Force:

Kathleen I. Ferguson, PE

Principal Deputy Assistant Secretary (Installations, Environment & Logistics)

Pentagon, Washington, D.C.

DATE: 12/10/1

Donald Forgione, Director

Division of Recreation and Parks

DATE:

Kevin Claridge, Director

Office of Coastal and Aquatic Managed Areas

DATE: /2/6/12

I.3 AIR FORCE, FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION (MILITARY TRAINING ON STATE LANDS)

MEMORANDUM OF AGREEMENT BETWEEN THE PRINCIPAL DEPUTY ASSISTANT SECRETARY OF THE AIR FORCE FOR INSTALLATIONS, ENVIRONMENT AND LOGISTICS PENTAGON, WASHINGTON, D.C. 20330 AND

FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION TALLAHASSEE, FL 32399

FOR THE PROVISION OF MILITARY TRAINING ON STATE LANDS

THIS MEMORANDUM OF AGREEMENT (hereafter, the "Agreement") is made and entered into by and between Office of the Principal Deputy Assistant Secretary of the Air Force for Installations, Environment and Logistics (hereinafter, "Air Force") and Florida Fish and Wildlife Conservation Commission (hereinafter, "Commission").

WITNESSETH:

WHEREAS, the Air Force, in order to successfully accomplish mission requirements has a need for expanded training opportunities in Northwest Florida beyond the current Department of Defense lands and training areas, and

WHEREAS, the Commission is responsible for managing, protecting, maintaining, and developing over 1.4 million acres of state conservation land ("Commission Lead-Managed Lands")

WHEREAS, the Parties have mutually concluded that it is desirable, practicable, and beneficial for the Parties to enter this Agreement to the mutual benefit of both and the goal is to work together in an effort to enhance both Parties.

- 1. Military training operations on the Commission Lead-Managed Lands in Northwest Florida can be compatible for both Parties without unreasonable impacts to resources if conducted with the proper planning and coordination.
- 2. Within 60 days of enactment of this Agreement, Commission staff and Air Force personnel will work together to develop a detailed "Annual Operations Plan" that:
 - a. Establishes a-framework through which military training exercises may be conducted on State owned Commission Lead-Managed Lands. This framework may include other appropriate instruments within the jurisdiction of both Parties.
 - b. Identifies number and locations of compatible available sites in the Northwest Florida region, to be defined as "training sites"
 - c. Provides detailed maps showing boundaries delineating training areas.
 - d. Details limitations of liability between the parties.
 - e. Estimates the frequency of use of the sites.
 - f. Indicates the types of compatible training allowed and the training activities that are expected to be prohibited.
 - Establishes procedures for requesting, cancelling, coordinating and notification of the use of training sites.

- h. Identifies options for compensation or reimbursement for the Commission providing lands for training through cash payment or in-kind services.
- i. Establishes a feedback mechanism to assess the usefulness of the training site for the Air Force and the impact, if any, upon the mission of the Commission.
- j. Identifies and clarifies the Air Force's responsibility with regard to the National Environmental Policy Act (NEPA)

- 3. This Agreement shall become effective upon the date last signed below, and shall remain in full force and effect until cancelled by mutual agreement of the Parties, or upon the provision of at least sixty (60) days advance written notice from the Party desiring to terminate this Agreement to the other Party. Upon becoming effective, this Agreement shall supersede all previous agreements between the Parties on the same subject.
- 4. Unless a notice of change of address is given, any and all notices shall be delivered to the parties at the following addresses:

<u>Commission</u> <u>Air Force</u>

Mike Brooks Section Leader Wildlife and Habitat Management Section 620 South Meridian Street Tallahassee, Florida 32399-1600 (850) 488-3831 Kathleen I. Ferguson, P.E. Principal Deputy Assistant Secretary (Installations, Environment & Logistics) Pentagon, Washington, D.C. (703) 697-6300

IN WITNESS WHEREOF, authorized representatives of the Parties have affixed their signatures hereto, in recognition and acceptance of the terms, conditions and obligations set forth and or assumed under this Agreement.

Florida Fish and Wildlife Conservation Commission:	Department of the Air Force:		
Nick Wiley, Executive Director	Kathleen I. Ferguson, P.E. Principal Deputy Assistant Secretary (Installations, Environment & Logistics) Pentagon, Washington, D.C.		
DATE:	DATE:		

I.4 AIR FORCE, NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT (MILITARY TRAINING ON DISTRICT LANDS)

MEMORANDUM OF AGREEMENT BETWEEN THE PRINCIPAL DEPUTY ASSISTANT SECRETARY OF THE AIR FORCE FOR INSTALLATIONS, ENVIRONMENT AND LOGISTICS PENTAGON, WASHINGTON, D.C. 20330 AND

NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT HAVANA, FL 32333

FOR THE PROVISION OF MILITARY TRAINING ON DISTRICT LANDS

THIS MEMORANDUM OF AGREEMENT (hereafter, the "Agreement") is made and entered into by and between Office of the Principal Deputy Assistant Secretary of the Air Force for Installations. Environment and Logistics (hereinafter, "Air Force") and Northwest Florida Water Management District (hereinafter, "District").

WITNESSETH:

WHEREAS, the Air Force, in order to successfully accomplish mission requirements has a need for expanded training opportunities in Northwest Florida beyond the current Department of Defense lands and training areas, and

WHEREAS, the District has worked for decades to protect and manage water resources in a sustainable manner for the continued welfare of people and natural systems across its 16-county area; and

WHEREAS, the Parties have mutually concluded that it is desirable, practicable, and beneficial for the Parties to enter this Agreement to the mutual benefit of both and the goal is to work together in an effort to enhance both Parties.

- Military training operations on District Lands in Northwest Florida can be compatible for both Parties without unreasonable impacts to water resources and natural systems if conducted with the proper planning and coordination.
- 2. Within 60 days of enactment of this Agreement, District staff and Air Force personnel will work together to develop a detailed "Annual Operations Plan" that:
 - Establishes a-framework through which military training exercises may be conducted on District Lands. This framework may include other appropriate instruments within the jurisdiction of both Parties.
 - b. Identifies number and locations of compatible available sites in the Northwest Florida region, to be defined as "training sites".
 - c. Provides detailed maps showing boundaries delineating training areas.
 - d. Details limitations of liability between the parties.
 - e. Estimates the frequency of use of the sites.
 - f. Indicates the types of compatible training allowed and the training activities that are expected to be prohibited.
 - g. Establishes procedures for requesting, cancelling, coordinating and notification of the use of training sites.

- h. Identifies options for compensation or reimbursement for the District providing lands for training through cash payment or in-kind services.
- i. Establishes a feedback mechanism to assess the usefulness of the training site for the Air Force and the impact, if any, upon the mission of the District.
- j. Identifies and clarifies the Air Force's responsibility with regard to the National Environmental Policy Act (NEPA)

- 3. This Agreement shall become effective upon the date last signed below, and shall remain in full force and effect until cancelled by mutual agreement of the Parties, or upon the provision of at least sixty (60) days advance written notice from the Party desiring to terminate this Agreement to the other Party. Upon becoming effective, this Agreement shall supersede all previous agreements between the Parties on the same subject.
- 4. Unless a notice of change of address is given, any and all notices shall be delivered to the parties at the following addresses:

DistrictAir ForceWilliam O. CleckleyKathleen I. Ferguson, P.E.Division DirectorPrincipal Deputy Assistant SecretaryDivision of Land Management & Acquisition(Installations, Environment & Logistics)81 Water Management DrivePentagon, Washington, D.C.Havana, Florida 32399-1600(703) 697-6300(850) 539-5999

IN WITNESS WHEREOF, authorized representatives of the Parties have affixed their signatures hereto, in recognition and acceptance of the terms, conditions and obligations set forth and or assumed under this Agreement.

Northwest Florida Water	Department of the Air Force:		
Management District:			
Jonathan P. Steverson, Executive Director	Kathleen I Ferguson DF		
Johathan F. Steverson, Executive Director	Kathleen I. Ferguson, P.E.		
	Principal Deputy Assistant Secretary		
	(Installations, Environment & Logistics)		
	Pentagon, Washington, D.C.		
DATE:	DATE:		